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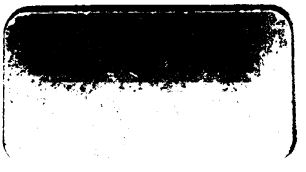
CAT.

M. M.S.
3/15/1900.



CAT.

M. MS.
3/15/1900.

Special attention is called to the following:

The next Annual Meeting of the MEDICAL SOCIETY OF NEW JERSEY will be held at Atlantic City, on the 4th and 5th of June, 1900.

Each District Society is entitled to three Delegates at large and one additional for every ten members. Permanent delegates will be elected at this session.

The District Reporters are requested to send their reports to the Chairman of the Standing Committee at least ten days before the time of the Annual Meeting.

The Standing Committee would remind Reporters that their reports are to be published in the volume of Transactions, and should therefore be carefully prepared, and that names and medical terms especially should be distinctly written. Reports from other physicians should be incorporated in their own report.

The Secretaries of the respective societies are requested to send a list of Annual and Permanent Delegates, and of Active Members in regular standing, with post-office addresses, to the Recording Secretary, Dr. Wm. J. Chandler, South Orange, at least ten days before the Annual Meeting.

The assessment upon the District Societies for the year ending June 5th, 1900, is $3.00 for each member.

FELLOWS' PRIZE ESSAY.

This prize is open to competition to the members of the District Medical Societies.

The essays must be signed with an assumed name and have a motto, both of which shall be endorsed on a sealed envelope, to accompany the Essay, containing the author's name, residence and District Society.

The Essays must be placed in the hands of the chairman of the Committee, on or before the first day in May, 1900.

In accordance with a request from the Fellows, "Hydrophobia" is suggested as the subject of the competing essays.

The Committee will select the first two essays in order of merit. To the first will be awarded the prize of one hundred dollars; to the second, that of honorary mention.

The unsuccessful authors will receive back their essays upon their identification to the chairman of the Committee. The successful Essays will be the property of the Society, and be published in its Transactions.

C. R. P. FISHER, *Chairman*, Bound Brook,
CHARLES J. KIPP, Newark,
P. A. HARRIS, Paterson,
Committee.

TRANSACTIONS

OF THE

MEDICAL SOCIETY

OF

NEW JERSEY.

1899.

L. J. Hardham, Printer, 243 & 245 Market Street, Newark, N. J.

1899.

OFFICERS, 1899.

PRESIDENT.

LUTHER M. HALSEY, . . . WILLIAMSTOWN

VICE-PRESIDENTS.

WILLIAM PIERSON, ... ORANGE
J. D. McGILL, ... JERSEY CITY
E. L. B. GODFREY, ... CAMDEN

CORRESPONDING SECRETARY.

E. W. HEDGES, ... PLAINFIELD

RECORDING SECRETARY.

WILLIAM J. CHANDLER, . . SOUTH ORANGE

TREASURER.

ARCHIBALD MERCER, ... NEWARK

STANDING COMMITTEE.

TERM EXPIRES 1900.

WILLIAM D. ISZARD, ... CAMDEN
STEPHEN PIERSON, ... MORRISTOWN

TERM EXPIRES 1901.

DOWLING BENJAMIN, ... CAMDEN
CHARLES YOUNG, ... NEWARK

TERM EXPIRES 1902.

HENRY W. ELMER, ... BRIDGETON
HENRY MITCHELL, ... ASBURY PARK

FELLOWS.

All persons who shall have been, or may hereafter be President of the Society, shall rank as Fellows, and be entitled to all the privileges of delegated members.

Act of Incorporation, Sec. 1.

The dates represent the year of official service as President.

Those marked thus (*) are deceased.

*ROBERT MCKEAN 1766
*WILLIAM BURNETT.. ...1767
*JOHN COCHRAN.....1768
*NATHANIEL SCUDDER....1770
*ISAAC SMITH.....1771
*JAMES NEWELL.. 1772
*ABSALOM BAINBRIDGE....1773
*THOMAS WIGGINS..... 1774
*HEZEKIAH STITES.....1775

* * * * *

*JOHN BEATTY.....1782
*THOMAS BARBER.....1783
*LAWRENCE VAN DERVEER.1784
*MOSES BLOOMFIELD.....1785
*WILLIAM BURNETT.....1786
*JONATHAN ELMER.....1787
*JAMES STRATTON.....1788
*MOSES SCOTT... 1789
*JOHN GRIFFITH.. 1790
*LEWIS DUNHAM..... ...1791
*ISAAC HARRIS.....1792
*ELISHA NEWELL 1795
*JONATHAN F. MORRIS....1807
*PETER I. STRYKER.....1808
*LEWIS MORGAN ... .1809
*LEWIS CONDICT.....1810
*CHARLES SMITH.....1811
*MATT. H. WILLIAMSON..1812
*SAMUEL FORMAN.....1814
*JOHN VAN CLEVE... 1815
*LEWIS DUNHAM.....1816
*PETER I. STRYKER.....1817
*JOHN VAN CLEVE.....1818
*LEWIS CONDICT..... 1819
*JAMES LEE..... 1820
*WILLIAM G. REYNOLDS..1821
*AUGUSTUS R. TAYLOR...1822
*WILLIAM B. EWING.....1823
*PETER I. STRYKER.....1824
*GILBERT S. WOODHULL..1825
*WM. D. MCKISSACK 1826
*ISAAC PIERSON..... 1827
*JEPTHA B. MUNN.....1828
*JOHN W. CRAIG.....1829
*AUGUSTUS R. TAYLOR. .1830
*THOMAS YARROW.. 1831
*FITZ RANDOLPH SMITH..1832
*WILLIAM FORMAN.....1833
*SAMUEL HAYES.....1834
*ABM. P. HAGEMAN.....1835
*HENRY VAN DERVEER...1836
*LYNDON A. SMITH... ...1837

*Benj. H. Stratton.....1838
*Jabez G. Goble.....1839
*Thomas P. Stewart.....1840
*Ferdinand S. Schenck..1841
*Zachariah Read..... 1842
*Abraham Skillman.....1843
*George R. Chetwood...1844
*Robert S. Smith.....1845
*Charles Hannah.....1846
*Jacob T. B. Skillman....1847
Samuel H. Pennington.1848
*Joseph Fithian.....1849
*Elias J. Marsh.....1850
*John H. Phillips.....1851
*Othn'l H. Taylor.....1852
*Samuel Lilly.....1853
*A. B. Dayton.....1854
*J. B. Coleman... 1855
*Richard M. Cooper.....1856
*Thomas Ryerson.....1857
*Isaac P. Coleman.....1858
*John R. Sickler.....1859
*Wm. Elmer.....1860
*Jno. Blane.....1861
*Jno. Woolverton.....1862
*Theo. R. Varick.....1863
*Ezra M. Hunt.....1864
*Abram Coles..... 1865
*Benjamin R. Bateman...1866
Jno. C. Johnson 1867
*Thomas J. Corson.....1868
*William Pierson ...1869
*Thomas F. Cullen.....1870
*Charles Hasbrouck....1871
Franklin Gauntt..... 1872
*T. J. Thomason.....1873
*G. H. Larison.....1874
*Wm. O'Gorman.....1875
*Jno. V. Schenck.....1876
Henry R. Baldwin.....1877
John S. Cook.....1878
Alex. W. Rogers.....1879
*Alex. N. Dougherty....1880
*Lewis W. Oakley..... .1881
*John W. Snowden.....1882
*Stephen Wickes.....1883
P. C. Barker.....1884
*Joseph Parrish.....1885
Charles J. Kipp.....1886
John W. Ward.....1887
H. Genet Taylor.....1888
*B. A. Watson... 1889
*Jas. S. Green..... 1890
Elias J. Marsh..... 1891
George T. Welch.....1892
John G. Ryerson..... 1983
O. H. Sproul.....1894
William Elmer.....1895
T. J. Smith..... 1896
David C. English..... 1897
C. R. P. Fisher..... ...1898

HONORARY MEMBERS.

*David Hosack, New York....1827
*J. W. Francis....1827
*John Condict, Orange....1830
*Usher Parsons, Rhode Island....1839
*Reuben D. Murphy, Cincinnati....1839
*Alban G. Smith, New York....1839
*Willard Parker, New York....1842
*Valentine Mott, New York....1843
*Jonathan Knight, New Haven....1848
*Nathaniel Chapman, Philadelphia....1848
*Alexander H. Stephens, New York....1848
*John C. Warren, Boston....1849
*Lewis C. Beck, New York....1850
*John C. Torrey, New York....1850
*George B. Wood, Philadelphia....1853
H. A. Buttolph, Short Hills, N. J....1854
*Ashbel Woodward, Franklin, Conn....1861
*Thomas W. Blatchford, Troy, N. Y....1861
*Jeremiah S. English, Manalapan, N. J....1867
*Stephen Wickes, Orange, N. J....1868
*S. O. Vanderpool, Albany, N. Y....1872
*Joseph Parrish, Burlington, N. J....1872
*Ferris Jacobs, Delhi, N. Y....1872
C. A. Lindsley, New Haven, Conn....1872
Wm. Pepper, Philadelphia....1874
S. Wier Mitchell, Philadelphia....1876
Cyrus F. Brackett, Princeton, N. J....1880
*Joseph C. Hutchinson, Brooklyn, N. Y....1880
Thomas Addis Emmett, New York....1884
*Isaac E. Taylor, New York....1884
*D. Hayes Agnew, Philadelphia....1886
*Jos. Leidy, Philadelphia....1886
Frederick S. Dennis, New York....1893
*John H. Ripley, New York....1893
Virgil P. Gibney, New York....1893
William Pierson, Orange, N. J....1894
Abram Jacobi, New York....1896
Virgil M. D. Marcy, Cape May City....1896
Samuel H. Pennington, Newark, N. J....1897

PERMANENT DELEGATES.

ATLANTIC—THEO. H. BOYSEN, Egg Harbor City.... 1899
BERGEN—HENRY C. NEER, Park Ridge.....1892
DANIEL A. CURRIE, Englewood 1899
BURLINGTON J. HOWARD PUGH, Burlington.. 1892
N. NEWLIN STOKES, Moorestown.....1895
A. W. TAYLOR, Beverly.. 1898
CAMDEN—ALEXANDER MARCY, Riverton.....1892
JAMES M. RIDGE, Camden... 1892
DUNCAN W. BLAKE, Gloucester..... 1895
ONAN B. GROSS, Camden..... .. 1895
WILLIAM H. IRELAND, Camden..... 1895
DANIEL STROCK, Camden..... ... .1899
WILLIAM H. ISZARD, Camden.....1899
CAPE MAY—RANDOLPH MARSHALL, Tuckahoe.....1899
CUMBERLAND—W. H. C. SMITH, Millville..... 1892
S. T. DAY, Port Norris 1899
ESSEX—ARTHUR WARD, Newark..... 1892
CHARLES YOUNG, Newark..... ... .1892
JOSEPH C. YOUNG, Newark..... 1892
GEORGE BAYLES, Orange..... 1896
HERMAN C. BLEYLE, Newark..... ... .1896
WILLIAM J. CHANDLER, South Orange..... 1896
EDWARD J. ILL, Newark.....1896
GEORGE R. KENT, Newark..... 1896
DANIEL M. SKINNER, Belleville..... 1896
CHARLES H. BAILEY, Bloomfield.....1898
THOMAS S. FITCH, Orange.....1898
RICHARD C. NEWTON, Montclair.....1898
JOSEPH D. OSBORNE, Newark..... 1898
WILLIAM RANKIN, Newark..... 1898
JOSHUA W. READ, Newark. 1898
GEORGE A. VAN WAGENEN, Newark.....1898
JAMES T. WRIGHTSON, Newark.....1898

GLOUCESTER—GEORGE E. READING, Woodbury.....1893
GEORGE C. LAWS, Paulsboro 1895
JAMES HUNTER, JR., Westville. 1898
HUDSON—J. D. MCGILL, Jersey City ... .1892
ROMEO F. CHABERT, Hoboken..... 1892
J. A. EXTON, Arlington.... 1898
HUNTERDON—ISAAC S. CRAMER, Flemington.....1892
W. S. CREVELING, Valley..... ...1896
NATHANIEL B. BOILEAU, Jutland.....1899
MERCER—CORNELIUS SHEPHERD, Trenton.....1892
R. R. ROGERS, SR, Trenton 1895
H. M. WEEKS, Trenton.....1895
DAVID WARMAN, Trenton 1897
ELMER BARWIS, Trenton... 1898
MIDDLESEX—EDWARD B. DANA, Metuchen.....1898
AMBROSE TREGANOWAN, South Amboy 1898
CHARLES H. VOORHEES, New Brunswick.....1899
MONMOUTH—HENRY C. COOKE, New Brunswick.... 1892
HENRY MITCHELL, Asbury Park.....1892
MORRIS—I. W. CONDICT, Dover... 1892
JOHN STIGER, Mendham..... 1892
LEVI FARROW, Middle Valley..... 1895
CUTHBERT WIGG, Boonton 1899
PASSAIC—W. B. JOHNSON, Paterson..... 1892
P. A. HARRIS, Paterson.....1893
GEORGE H. BALLERAY, Paterson 1896
JOHN L. LEAL, Paterson. 1899
W. K. NEWTON, Paterson.....1899
CALVIN TERRIBERRY, Paterson 1899
SALEM—B. A. WADDINGTON, Salem.....1893
F. BILDERBACK, Salem..... 1899
SOMERSET—H. G. WAGONER, Somerville.....1892
S. O. B. TAYLOR, Millstone.....1897
J. P. HECHT, Raritan.... 1898
SUSSEX—SIDNEY B. STRALEY, Andover.. 1899
E. MORRISON, Newton..... 1899
B. W. FERGUSON, Beemerville. 1899

UNION—ALONZO PETTIT, Elizabeth.....1893
E. B SILVERS, Rahway.....1893
J. ACKERMAN COLES, Scotch Plains.....1896
T. H. TOMLINSON, Plainfield.....1896
T. N. MCLEAN, Elizabeth.....1898
WARREN—WILLIAM H. MCGEE, Belvidere.....1896
ALVA C. VAN SYCKLE, Hackettstown.....1899

Members of District Medical Societies

REPRESENTED AT THE

ANNUAL MEETING, 1899.

ATLANTIC COUNTY.

(District Society organized June 7, 1880. Annual meeting first week in February.)

A. D. Cuskaden, *Pres.*, *Atlantic City*
Walter Reynolds, *V.-Pres.*, "
Wm. E Darnall, *Sec'y & Treas.*, *Atlantic City*
Emery Marvel, *Rep.*, "
T. H. Boysen, *Egg Harbor City*
W. M. Barnes, *Atlantic City*
E. C. Chew, "
J. M. Elmer, *Egg Harbor City*
W. B. Fayerman, *Atlantic City*
G. R. Gebring, *Bakersville*
H. C. James, *May's Landing*
C. R. Johnson, *Atlantic City*
J. Addison Joy, "
E. H. Madden, *Absecon*
Philip Marvel, *Atlantic City*
B. C. Pennington, "
W. M. Pollard, "
W. M. Powell, "
Eugene L. Reed, "
Talbot Reed, "
Edward A. Reiley, "
Theodore Senseman, "
E. S. Sharpe, "
A. B. Shimer, "
L. R. Souder, "
J. W. Snowball, "
W. B. Stewart, "
J. B. Thompson, "

No. members, 28.

BERGEN COUNTY.

(District Society reorganized February 28, 1854. Annual meeting second Tuesday in April.)

Howard McFadden, *Pres.*, *Hackensack*
Chas. Calhoun, *V.-Pres.*, *Rutherford*
Daniel A. Currie, *Sec'y*, *Englewood*
David St. John, *Treas.*, *Hackensack*
J. W. Proctor, *Rep.*, *Englewood*
Sam'l E. Armstrong, *Rutherford*
M. S. Ayres, *Fairview*
H. M. Banks, *Englewood*

Chas. D. Brooks, *Hackensack*
M. Blinckston, *Westwood*
E. E. Conover, *Hasbrouck Heights*
Edgar K. Conrad, *Hackensack*
J. F. Demund, *Ridgewood*
H. C. Elsing, *Ridgefield Park*
Geo. Bancroft Gale, *Rutherford*
John J. Haring, *Tenafly*
Joseph Huger, *Fort Lee*
Eugene Jehl, *Park Ridge*
J. B. W. Lansing, *Tenafly*
H. C. Neer, *Park Ridge*
L. B. Parsells, *Closter*
J. E. Pratt, *Schraalenburgh*
B. D. Stone, *Westwood*
J. W. Terry, *Englewood*
A. L. Vandewater, *Hackensack*
Myron Van Horn, *Englewood*
William L. Vroom, *Ridgewood*
J. A. Wells, *Englewood*
J. Talmage Wyckoff, *Leonia*
Max Wyler, *Fort Lee*
Samuel J. Zabriskie, *Westwood*

No. members, 31.

BURLINGTON COUNTY.

(Society organized May 19, 1829. Meets third Tuesday in January, April, June and October. Annual meeting second Tuesday in April.)

Wm. L. Martin, *Pres.*, *Rancocas*
F. S. Janney, *V.-Pres.*, *Riverton*
A. W. Taylor, *Sec'y*, *Beverly*
E. Hollingshead, *Treas.*, *Pemberton*
W. E. Hall, *Hist.*, *Burlington*
Joseph Stokes, *Rep.*, *Moorestown*
J. D. Janney, *Censor*, *Cinnaminson*
Wm. P. Melcher, " *Mount Holly*
Emma P. Weeks, " *Riverside*
David Baird, Jr., *Florence*
J. E. Dubell, *Columbus*
John J. Flynn, *Mount Holly*
Franklin Gauntt, *Burlington*
F. A. Gauntt, "
I. W. Hollingshead, *Moorestown*
B. W. Macfarland, *Bordentown*
Alex. Marcy, *Riverton*
W. C. Parry, *Lumberton*
R. H. Parsons, "
T. T. Price, *Tuckerton*
Elmer D. Prickett, *Mount Holly*
J. H. Pugh, *Burlington*
J. Reeve, *Medford*
Lewis L. Sharp, "
A. H. Small, *Riverside*
W. H. Shipps, *Bordentown*
N. N. Stokes, *Moorestown*
F. G. Stroud, "
Irene D. Young, *Bordentown*

CONTRIBUTING MEMBER.

William Martin, *Bristol, Pa.*

HONORARY MEMBERS.

Chas. P. Noble, *1637 N. Broad St., Philadelphia, Pa.*
E. P. Townsend, *Billings, Mont.*
Chas. H. Thomas, *1907 Chestnut St., Phila., Pa.*

No. members, 29.

CAMDEN COUNTY.

(Organized August 14, 1846. Annual meeting second Tuesday in May.)

Wm. S. Jones, *Pres.*, *Camden*
John F. Leavitt, *V.-Pres.*, "
Paul M. Mecray, *Sec'y*, "
Jos. L. Nicholson, *Treas.*, "
John G. Doran, *Rep*, "
H. H. Sherk, *Hist.*, *Stockton*
Jos. S. Baer, *Camden*
W. G. Bailey, "
Duncan W. Blake, *Gloucester*
Chas. S. Braddock, *Haddonfield*
W. S. Bray, *Camden*
Philip W. Beale, "
Dowling Benjamin, "
John K. Bennett, *Gloucester*
Sylvan G. Bushey, *Camden*
Robert Casperson, "
Wm. A. Davis, "
E. E. DeGrofft, "
Clarence B. Donges, "
John W. Donges, "
Joel W. Fithian, "
E. L. B. Godfrey, "
Onan B. Gross, "
J. J. Haley, *Gloucester*
Levi B. Hirst, *Camden*
Conrad G. Hoell, "
Frank L. Horning, "
Jos. E. Hurff, *Blackwood*
Wm. H. Ireland, *Camden*
Wm. H. Iszard, "
Henry Jarrett, "
Chas. H. Jennings, *Merchantville*
Wm. B. Jennings, *Haddonfield*
Wm. W. Kain, *Camden*
Grant E. Kirk, "
Adrinette LeFevre, *Blackwood*
B. S. Lewis, *Camden*
A. H. Lippencott, "
Alexander McAlister, "
Alex. Marcy, *Riverton*
Frederick W. Marcy, *Camden*
John W. Marcy, *Merchantville*
Marcus K. Mines, *Camden*
Alex. M. Mecray, "
J. W. Martendale, *Cramer Hill*
Milton W. Osmun, *Camden*
Howard F. Palm, "
Wm. H. Pratt, "
Sophia Fresly, "
Wm. R. Powell, "
Jas. M. Ridge, "
Frank N. Robinson, "
Edw. A. Y. Schellinger, "
Chas. H. Shivers, *Haddonfield*
J. Anson Smith, *Blackwood*
John R. Stevenson, *Haddonfield*
Daniel Stout, *Camden*
Daniel Strock, "
H. Genet Taylor, "
Wm. A. Westcott, *Berlin*
Jos. H. Wills, *Camden*
W. P. Wingender, "
E. B. Woolston, *Marlton*

HONORARY MEMBERS.

G. W. Boughman, *Marshalltown*
New Castle Co., Delaware
Richard C. Dean, *U. S. Navy*
Chas. C. Garrison, *Merchantville*
J. W. Hewlings, *Moorestown*
D. P. Pancoast, *Mullica Hill*
J. Orlando White, *Camden*
J. G. Young. *Philadelphia, Pa.*

No. members, 63.

CAPE MAY COUNTY.

(Society organized March 12, 1883. Meets first Tuesday in April and November.)

A. L. Leach, *Pres.*, *Cape May*
J. S. Douglass, *V.-Pres.*, *Tuckahoe*
Randolph Marshall, *Treas.*, "
C. B. Corson, *Sec'y & Rep.*, *South Seaville*
B. T. Abbott, *Censor*, *Ocean City*
W. S. Leaming, " *Cape May*
V. M. D. Marcey, " "
N. A. Cohen, *Wildwood*
I. M. Downs, *Court House*
Wm. A. Lake, *Green Creek*
Joseph Marshall, *Tuckahoe*
James Mecray, *Cape May*
Emlen Physic, "
Eugene Way, *Dennisville*
J. Way, *Cape May Court House*
W. R. Wales, *Cape May*

HONORARY MEMBERS.

Chas. M. Gandy, *U. S. Army*
Coleman Leaming, *Cape May Court House*
Jonathan Leaming, *Cape May Court House*
J. H. Ingram, *China*

No. members, 16.

CUMBERLAND COUNTY.

(Society organized December 8, 1818. Annual meeting second Tuesday in April.)

Ellsmore Stites, *Pres.*, *Bridgeton*
F. M. Bateman, *V.-Pres.*, *Cedarville*
Hamilton Mailly, *Sec'y*, *Bridgeton*
Jos. Tomlinson, *Treas.*, "
J. C. Applegate, *Rep.*, "
O. H. Adams, *Vineland*
Eph'm Bateman, *Cedarville*
N. H. Burt, *Fairton*
Alfred Cornwell, *Bridgeton*
J. R. Dare, *Sunbury, Pa.*
T. G. Davis, *Bridgeton*
G. E. Day, *Millville*
S. T. Day, *Port Norris*
H. W. Elmer, *Bridgeton*
M. K. Elmer, "
Edward Fogg, *Shiloh*
L. L. Hand, *Leesburg*
Lester Hummell, *Greenwich*
H. G. Miller, *Millville*
W. L. Newell, "
D. H. Oliver, *Bridgeton*
W. F. Sawyer, *Vineland*
E. B. Sharp, *Camden*
Jos. Sheppard, *Bridgeton*
T. J. Smith, "
W. H. C. Smith, *Millville*
S. M. Snyder, *Greenwich*
J. R. C. Thompson, *Bridgeton*
J. W. Wade, *Millville*
J. B. Ware, *Bridgeton*
C. W. Wilson, *Vineland*

ASSOCIATE MEMBERS.

W. E. Ashton, *Philadelphia, Pa.*
J. M. Barten, " "
J. Chalmers DaCosta, " "
B. C. Hirst, " "
W. W. Keen, *Philadelphia, Pa.*
Chas. P. Noble, " "
Chas. O. Oliver, " "
David Reisman, " "
H. A. Hare, " "

No. members, 31.

ESSEX COUNTY.

(Society organized June 8, 1816. Annual meeting first Tuesday in April.)

L. Eugene Hollister, *Pres.*, *Newark*
Thos. N. Harvey, *V.-Pres.*, *Orange*
Archibald Mercer, *Sec'y*, *Newark*
Chas. D. Bennett, *Treas.*, "
William S. Disbrow, *Rep.*, "
William B. Arnold, *Orange*
Maurice Asher, *Newark*
Charles H. Bailey, *Bloomfield*
Aaron K. Baldwin, *Newark*
Samuel H. Baldwin, "
George Bayles, *Orange*
Frederick W. Becker, *Newark*
Arthur W. Bingham, *E. Orange*
Hermann C. Bleyle, *Newark*
John H. Bradshaw, *Orange*
Rudolph Braun, *Newark*
William M. Brien, *Orange Valley*
James S. Brown, *Montclair*
Walter R. Bruyere, *Newark*
William Buermann, "
Edwin L. Burns, "
Robert L. Burrage, *East Orange*
Charles N. Büttner, *Orange*
William E. Carroll, *Newark*
Levi W. Case, *Montclair*
Douglass A. Cater, *Orange*
William J. Chandler, *So. Orange*
Robert W. Chapman, *Newark*
Albion C. Christian, *Irvington*
J. Henry Clark, *Newark*
Henry L. Coit, "
Horace C. Cory, "
Everit P. Courtright, "
Theodore W. Corwin, "
Mathias S. Crane, "
Wm. H. K. Davis, *East Orange*
John Dennis, *Newark*
Richard G. P. Dieffenbach, "
Daniel M. Dill, "
Walter Dodge, *Orange*
Arthur C. Dougherty, *Newark*
John L. Duryee, "
Wells P. Eagleton, "
David J. Edwards, "
Thomas P. Edwards, "
Julius Egge, "
David E. English, *Milburn*
James R. English, *Irvington*
Thomas Dunn English, *Newark*
Joseph Fewsmith, "
Thomas S. Fitch, *Orange*
Paul Fitzgerald, *Newark*
Richard P. Francis, *Montclair*
R. D. Freeman, *South Orange*
Albert Frey, *Newark*
Ruel S. Gage, "
William Gauch, "
Isabel M. Geddes, "
Robert F. Gillin, "
Herman A. Glatzmayer, "
William Glatzmayer, "
William M. Goodwin, "
William B. Graves, *East Orange*
Thomas N. Gray, "
Chauncey B. Griffiths, *Newark*
Solomon Greenbaum, "
Charles W. Hagen, "
Joseph F. Hager, "
John F. Hagerty, "
Frederick W. Hagney, "
Eleanor Haines, "
Levi W. Halsey, *Montclair*

Edward H. Hamill,	*Newark*	Franklin M. Meyer,	*Newark*
Mary Harley,	"	Andrew M. Mills,	"
E. Zeh Hawkes,	"	W. D. Mitchell,	*East Orange*
Joseph H. Haydon,	"	Clement Morris,	*Newark*
John Hemsath,	"	Frederick C. Nadler,	"
Henry T. Herold,	"	Albert B. Nash,	"
Herman C. H. Herold,	"	Emanuel Newman,	"
Livingston S. Hinckley,	"	Richard C. Newton,	*Montclair*
James S. Hoffman,	"	William M. O'Reilly,	*Orange*
Edgar Holden,	"	Joseph D. Osborne,	*Newark*
William H. Holmes,	*Orange*	Edward E. Peck,	*Caldwell*
John C. Houston,	*Newark*	William Pennington,	*Irvington*
Charles L. Ill,	"	Edward D. Phelan,	*Newark*
Edward J. Ill,	"	Thomas F. Phelan,	*Orange*
Frederick C. Jacobson,	"	George B. Philhower,	*Nutley*
William M. Johnson,	"	William Pierson,	*Orange*
Jotham C. Johnson,	"	Robert C. Potter,	*Newark*
William A. Judson,	"	Henry A. Pulsford,	*South Orange*
George R. Kent,	"	John M. Rand,	*Newark*
Charles J. Kipp,	"	Charles D. Randall,	"
J. M. W. Kitchen,	*East Orange*	William Rankin,	"
Francis E. Knowles,	*So. Orange*	Joshua W. Read,	"
Henry A. Kornemann,	*Newark*	Edward M. Richman,	"
Marie L. Lefort,	"	Philip Ricord,	"
Charles Lehlbach,	"	Charles D. Ripley,	"
Jesse D. Lippincott,	"	Samuel E. Robertson,	"
Frank W. Lockwood,	*East Orange*	Benjamin A. Robinson,	"
Herbert W. Long,	*Newark*	Manning W. Robinson,	"
Thomas W. Loweree,	"	Wm. D. Robinson,	*East Orange*
Calista V. Luther,	"	Hugh P. Roden,	*Newark*
Ernest M. Lyon,	"	William J. Roeber,	"
Henry D. McCormick,	"	George A. Rogers,	"
Floy McEwen,	"	Robert H. Rogers,	"
William H. McKenzie,	"	George W. Rolerfort,	"
James M. Maghee,	*Orange*	Mefford Runyon,	*South Orange*
William H. Martland,	*Newark*	Charles A. Schureman,	*Newark*
Henry E. Matthews,	*Orange*	Emanuel Schwartz,	"
Sarah R. Mead,	*Newark*	Edward Sealy,	"
Pancrazio M. Megaro,	"	William F. Seidler,	"

Marco Seidman,	*Newark*	George N. Wait,	*Newark*
William F. Shick,	"	David L. Wallace,	"
M. Herbert Simmons,	*Orange*	Henry J. F. Wallhauser,	"
Daniel M. Skinner,	*Belleville*	Arthur Ward,	"
Anna L. Smith,	*Montclair*	Aaron C Ward,	"
E. Fayette Smith,	*Newark*	Edwin M. Ward,	*Bloomfield*
D. Winans Smith,	"	Leslie D. Ward,	*Newark*
Joseph F. Somerhof,	"	William S. Ward,	"
Edward Staehlin,	"	William H. Warren,	"
Robert G. Stanwood,	"	Walter S. Washington,	"
Joseph S. Sutphen,	"	Frederick Webner,	"
Robert M. Sutphen,	"	William H. White,	*Bloomfield*
Theron Y. Sutphen,	"	Henry B. Whitehorne,	*Verona*
James S. Taylor,	*Orange*	Albert Wickman,	*Newark*
Charles E. Teeter,	*Newark*	W. Stockton Wilson,	"
J. Francis E. Tetreault,	*Orange*	Charles H. Winans,	*Belleville*
Frederick W. Thum,	*Newark*	Henry M. Woolman,	*Newark*
Henry A. Towle,	"	Edward E. Worl,	"
Sidney A. Twinch,	"	James A. Wormley,	"
Charles F. Underwood,	"	James T. Wrightson,	"
Herbert B. Vail,	*Belleville*	Charles Young,	"
M. H. Cash Vail,	*Vailsburg*	Joseph C. Young,	"
Geo. A. Van Wagenen,	*Newark*	Charles M. Zeh,	"

HONORARY MEMBER.

Samuel H. Pennington, *Newark.*

No. members, 196.

GLOUCESTER COUNTY.

(Society organized December, 1818. Annual meeting third Thursday in January.)

Chas. S. Heritage, *Pres.*,	*Glassboro*	Harry A. Stout, *Censor*,	*Wenonah*
Eugene Hillegass, *V.-Pres.*,	*Mantua*	Samuel F. Ashcraft,	*Mullica Hill*
Geo. E. Reading, *Sec'y & Treas.*,	*Woodbury*	Geo. W. Bailey,	*Wenonah*
Wm. Brewer, *Rep.*,	*Woodbury*	Charles M. Burk,	*Clarksboro*
L. M. Halsey, *Censor*,	*Williamstown*	Henry C. Clark,	*Woodbury*
Jas. Hunter, Jr., *Censor*,	*Westville*	Henry B. Diverty,	"
		J. Gaunt Edwards,	*Williamstown*
		C. Frank Fisler,	*Clayton*
		T. Franklin Gifford,	*Woodbury*

Jos. M. Husted,	*Clayton*	Samuel F. Stanger,	*Harrisonville*
Geo. C. Laws,	*Paulsboro*	P. E. Stilwagon,	*Bridgeport*
Eugene T. Oliphant,	*Bridgeport*	B. A. Waddington,	*Salem*
Cyrus B. Phillips,	*Hurffville*	Howard A. Wilson,	*Woodbury*
Albert Porch,	*Clayton*		

HONORARY MEMBERS.

Judson Daland,	*Philadelphia*	E. E. Montgomery,	*Philadelphia*
E. E. DeGrofft,	*Camden*	Mordecai Price,	"
Hobart A. Hare,	*Philadelphia*	John B. Roberts,	"
William H. Iszard,	*Camden*	Charles S. Turnbull,	"
John J. Kromer,	*Philadelphia*	James Tyson,	"

No. members, 24.

HUDSON COUNTY.

(Society organized October 1, 1851. Annual meeting first Tuesday in May.)

Chas. K. Law, *Pres.*,	*Jersey City*	Edwin K. Dunkle,	*Jersey City*
Geo. W. Shera, *Sec'y*,	"	Lucius F. Donohue,	*Bayonne*
Henry H. Brinkerhoff, *Treas.*,	*Jersey City*	Alexander Dallas,	"
		Benjamin Edge,	*Jersey City*
H. H. Burnett, *Rep.*,	*Hoboken*	John R. Everitt,	"
Ulamer Allen,	*Jersey City*	James A. Exton,	*Arlington*
Edward P. Buffett,	"	John Faber,	*Jersey City*
John J. Broderick,	"	Joseph F. Finn,	"
Edward L. Bull,	"	William F. Faison,	"
Oliver R. Blanchard,	"	N. Frederick Feury,	"
Frank Bowyer,	"	William Friele,	"
J. G. Lewis Borgmeyer,	*Bayonne*	Leonard J. Gordan,	"
Burdette P. Craig,	*Jersey City*	Frank D. Gray,	"
John E. Corrigan,	"	Charles A. Gilchrist,	*Hoboken*
Talbot R. Chambers,	"	John P. Henry,	*Jersey City*
Charles W. Cropper,	"	Charles D. Hill,	"
S. Herbert Culver,	"	Peter Hoffman,	"
Romeo F. Chalbert,	*Hoboken*	William L. Hetherington,	"
John J. Cunnelly,	"	Edward P. Hart,	"
Frederick M. Corwin,	*Bayonne*	Samuel A. Helfer,	*Hoboken*
Gordan K. Dickinson,	*Jersey City*	Roy Inglis,	*Jersey City*
Florence De Hart,	"	Calvin F. Kyte,	"

A. J. Kirsten,	*Jersey City*	Walter Pocock,	*Bayonne*
J. C. Kilgore,	*Bayonne*	Joseph M. Rector,	*Jersey City*
Henry H. Lynch,	*Jersey City*	Frederick C. Robertson,	"
Mortimer Lampson,	"	Henry B. Rue,	*Hoboken*
F. E. Lambert,	"	Joseph H. Rosenkranz,	"
John D. McGill,	"	Henry Spence,	*Jersey City*
George E. McLaughlin,	"	Robert Stewart,	"
John J. McLean,	"	George H. Sexsmith,	*Bayonne*
Frank W. Mallalieu,	"	H. Melville Smith,	*South Orange*
Edward G. Marks,	*Arlington*	Hamilton Vreeland,	*Jersey City*
John Nevin,	*Jersey City*	Conrad Wienges,	"
William J. Parker,	"	William Perry Watson,	"
John C. Parsons,	"	John E. West,	"
Charles H. Purdy,	"	Joseph Wolfson,	"
Imanuel Pyle,	"		

No. members, 72.

HUNTERDON COUNTY.

(Society organized June 12, 1821. Annual meeting fourth Tuesday in April.)

A. B. Nash, *Pres.*,	*Frenchtown*	Frank Grim,	*Baptistown*
O. H. Sproul, *Sec'y*,	*Flemington*	F. L. Johnson,	*Stanton*
I. S. Cramer, *Treas.*,	"	M. D. Knight,	*Clinton*
Geo. N. Best,	*Rosemont*	F. W. Larison,	*Lambertville*
N. B. Boileau,	*Jutland*	E. D. Leidy,	*Flemington*
W. S. Creveling,	*Valley*	E. H. Moore,	*White House*
W. E. Cornog,	*Sergeantsville*	Geo. L. Romine,	*Lambertville*
E. W. Closson,	*Lambertville*	Geo. W. Bartow,	*Three Bridges*
J. H. Ewing,	*Flemington*		

HONORARY MEMBERS

Mathias Abel,	*Providence, R. I.*	W. D. Wolverton,	*U. S. Army*
H. P. Loomis,	*New York City*		

No. members, 17.

MERCER COUNTY.

(Society organized May 23, 1848. Annual meeting second Tuesday in May.)

E. S. Hawke, *Pres.*,	*Trenton*	Ira M. Shepherd, *Treas.*,	*Trenton*
Geo. N. J. Sommer, *V.-Pres.*,	"	J. F. Chattin, *Rep.*,	"
Geo. H. Parker, *Sec'y*,	"	Chas. F. Adams,	"

Alexander Armstrong,	*Trenton*	Chas. H. McIlwaine,	*Trenton*
Elmer Barwis,	"	Geo. R. Moore,	"
Henry M. Beatty,	"	H. G. Norton,	"
Charles P. Britton,	"	N. B. Oliphant,	"
A. T. Bruere,	"	R. H. C. Phillips,	"
John Bruyère,	"	Wm. Rice,	"
W. A. Clark,	"	Elmer H. Rogers,	"
J. C. Craythorn,	"	R. R. Rogers, Sr.,	"
Paul L. Cort,	"	R. R. Rogers, Jr.,	"
Henry B. Costill,	"	Wm. Radcliffe,	*Hopewell*
A. H. Dey,	"	Joseph B. Shaw,	*Trenton*
E. L. Dickinson,	"	Cornelius Shepherd,	"
William Elmer,	"	W. D. Stevenson,	"
Geo. H. Franklin,	*Hightstown*	Geo. H. Silvers,	*Hightstown*
J. C. Felty,	*Trenton*	G. Schoening,	*Trenton*
W. J. Hall,	"	Wm. McD. Struble,	"
A. I. Hunt,	*Hamilton Square*	W. B. Van Duyn,	"
J. S. Jamieson,	*Trenton*	John W. Ward,	"
Mozart Jenkins,	"	David Warman,	"
Wm. S. Lalor,	"	Henry M. Weeks,	"
Lyman Leavitt,	"	J. H. Wikoff,	*Princeton*
Thos. H. Mackenzie,	"	William Wilbur,	*Hightstown*
Walter Madden,	"	P. W. Yard,	*Trenton*
Benj. W. McGalliard,	"		

No. members, 53.

MIDDLESEX COUNTY.

(Society organized June 16, 1816. Annual meeting third Wednesday in April.)

J. L. Suydam, *Pres.*,	*Jamesburg*	A. C. Hunt,	*Metuchen*
W. M. Moore, *V.-Pres.*,	*Metuchen*	Wm. V. McKenzie,	"
D. Stephens, *Sec'y*,	*New Brunswick*	F. E. Riva,	*Milltown*
D. C. English, *Treas.*,	"	P. A. Shannon,	*New Brunswick*
A. L. Smith, *Rep.*,	"	C. M. Slack,	"
H. R. Baldwin,	"	H. C. Symmes,	*Cranbury*
J. J. Bissett,	*Paterson*	A. Treganowan,	*South Amboy*
S. V. D. Clark,	*New Brunswick*	C. H. Voorhees,	*New Brunswick*
Edward B. Dana,	*Metuchen*	N. Williamson,	"
F. M. Donahue,	*New Brunswick*	J. G. Wilson,	*Perth Amboy*
J. C. Holmes,	*Cranbury*		

No. members, 21.

MONMOUTH COUNTY.

(Society organized July 16, 1816. Annual meeting third Monday in May.)

F. C. Price, *Pres.*,	*Imlaystown*	W. U. Kurtz,	*Eatontown*
D. M. Forman, *Sec'y*,	*Freehold*	I. S. Long,	*Freehold*
A. F. Applegate,	*Englishtown*	S. F. MacIntosh,	*Asbury Park*
Wm. B. Beach,	*Eatontown*	Wm. MacMillan,	*Perrineville*
Ellis W. Crater,	*Ocean Port*	J. G. Maynard,	*Freehold*
H. G. Cooke,	*New Brunswick*	Henry Mitchell,	*Asbury Park*
V. M. Disbrow,	*Lakewood*	P. B. Pumyea,	*Allentown*
Edwin Field,	*Red Bank*	Edgar Roberts,	*Keyport*
D. D. Hendrickson,	*Middletown*	Harry E. Shaw,	*Long Branch*
H. A. Hendrickson,	*Atlantic Highlands*	Edw. F. Taylor,	*Middletown*
		John Taylor,	*Ocean Grove*
Wm. M. Hepburn,	*Freehold*	Chas. H. Thompson,	*Belmar*
A. H. Higgins,	*Manasquan*	Fred. Thompson,	*Holmdel*
G. G. Hoagland,	*Keyport*	W. W. Trout,	*Spring Lake*
A. J. Jackson,	*Matawan*	Wm. B. Warner,	*Red Bank*
Harris P. Johnson,	*Allentown*	Geo. F. Wilbur.	*Asbury Park*
Samuel Johnson,	*Asbury Park*	Alex. Williamson,	"
W. R. Kinmouth,	*Farmingdale*	W. S. Whitmore,	*Red Bank*
C. Knecht,	*Matawan*	Scudder Wooley,	*Long Branch*

HONORARY MEMBERS.

Robert Laird,	*Manasquan*	Geo. T. Welsh,	*Passaic*
J. E. Arrowsmith,	*Keyport*		

No. members, 37.

MORRIS COUNTY.

(Society organized June 1, 1815. Annual Meeting second Tuesday in May.)

J. Walters, *Pres.*,	*Port Oram*	A. E. Carpenter,	*Boonton*
H. W. Kice, *V.-Pres.*,	"	T. R. Crittenden,	*Dover*
Levi Farrow, *Sec'y*,	*Middle Valley*	A. W. Condict,	"
J. S. Stiger, *Treas.*,	*Mendham*	I. W. Condict,	"
E. P. Cooper, *Rep.*,	*Troy Hills*	R. L Cook,	"
N. H. Adsit,	*Succasunna*	G. O. Cummins,	"
C. Anderson,	*Madison*	Harris Day,	*Chester*
P. C. Barker,	*Morristown*	H. V. Day,	*Bloomingdale*
G. A. Becker,	"	G. S. DeGroot,	*Mendham*
L. F. Bishop,	"	James Douglas,	*Morristown*

B. D. Evans,	*Morris Plains*	H. M. O'Reily,	*Morristown*
J. Williard Farrow,	*Dover*	S. Pierson,	"
F. W. Flagge,	*Rockaway*	T. P. Prout,	*Morris Plains*
G. H. Foster,	"	S. H. Reed,	*Madison*
W. S. Foster,	*Flanders*	Wm. H. Risk,	*Summit*
Elliot Gorton,	*Morris Plains*	J. B. Risk,	"
H. A. Henriques,	*Morristown*	J. G. Ryerson,	*Boonton*
B. M. Howley,	"	G. M. Swaim,	*Chatham*
A. A. Lewis,	"	E. Sutton,	*German Valley*
H. B. McCarroll,	"	J. L. Taylor,	*Boonton*
A. A. Macwithey,	*Pompton*	H. C. Upchurch,	*Kenvil*
P. S. Mallon,	*Morris Plains*	H. S. Wheeler,	*Whippany*
C. N. Miller,	*German Valley*	C. Wigg,	*Boonton*
L. L. Mial,	*Morristown*	W. J. Wolfe,	*Chatham*
F. W. Owen,	"		

HONORARY MEMBERS.

P. A. Harris,	*Paterson*	C. Y. Swan,	*Morristown*

No. members, 49.

OCEAN COUNTY.

Frank Brown,	*Manchester*	Ralph Jones,	*Toms River*
R. L. Disbrow,	*Toms River*	I. C. Schureman,	"
E. C. Disbrow,	"		

No. members, 5.

PASSAIC COUNTY.

(Society organized July 14, 1844. Annual meeting third Tuesday in April.)

J. M. Stewart, *Pres.*,	*Paterson*	J. W. Atkinson,	*Paterson*
J. W. Smith, *V.-Pres.*,	"	G. H. Balleray,	"
R. M. Curts, *Sec'y*,	"	J. S. Bibby,	"
George Fischer, *Treas.*,	"	Chas. Blundell,	"
H. H. Lucas, *Rep.*,	"	W. Blundell,	"
J. H. Banta, *Censor*,	"	D. T. Bowden,	"
T. J. Kane, "	"	J. A. Browne,	"
W. K. Newton, "	"	V. E. Bullen,	"
F. E. Agnew,	"	W. H. Carroll,	*Passaic*
A. Alexander,	"	D. R. Crounse,	"

G. S. Davenport,	*Garfield*	W. Neer,	*Paterson*
S. De Jager,	*Paterson*	J. F. O'Donnell,	"
F. F. G. Demarest,	*Passaic*	T. F. O'Grady,	"
Edward F. Denner,	*Paterson*	H. Park,	"
T. F. Fitzmaurice,	"	J. R. Paxton,	"
William Flitcroft,	"	A. W. Rogers,	"
O. V. Garnett,	"	B. H. Rogers,	"
J. T. Gillson,	"	G. T. Rundle,	*Passaic*
M. W. Gillson,	"	C. H. Scribner,	*Paterson*
P. A. Harris,	"	W. R. Smith,	*Little Falls*
J. H. Henggeler,	"	R. Stinson,	*Paterson*
W. B. Johnson,	"	J. Sullivan,	*Passaic*
A. D. Jousset,	"	Isaac Surnamer,	*Paterson*
H. Kip,	"	M. J. Synott,	*Little Falls*
J. L. Leal,	"	C. Terriberry,	*Paterson*
M. A. Mackintosh,	"	G. W. Terriberry,	"
B. J. Marsh,	"	R. A. Terhune,	*Passaic*
A. F. McBride,	"	P. H. Terhune,	"
J. C. McCoy,	"	S. Van Dalsen,	*Paterson*
J. R. Merrill,	"	C. S. Van Riper,	"
S. R. Merrill,	"	C. Van Riper,	*Passaic*
E. B. Morgan,	"	George Vreeland,	*Paterson*
C. F. W. Myers,	"	F. Vigna,	"
R. Neer,	"	J. W. Williams,	"

HONORARY MEMBER.

J. C. Herrick, *Colorado Springs, Col.*

No. members, 68.

SALEM COUNTY.

(Society organized May 4, 1880. Annual meeting first Wednesday in May.)

N. S. Hires, *Pres.*,	*Salem*	W. H. Carpenter, *Censor*,	*Salem*
R. M. Davis, *V.-Pres*,	"	G. W. H. Fitch, *Rep*,	*Daretown*
Henry Chavanne, *Sec'y and Treas.*,	"	F. Bilderback,	*Salem*
H. T. Johnson, *Censor*,	*Pedricktown*	W. L. Ewen,	*Alloway*
		W. T. Good,	*Quinton*
Daniel Garrison, *Censor*,	*Pennsgrove*	W. H. James,	*Pennsville*
		B. A. Waddington,	*Salem*

HONORARY MEMBERS.

H. M. Christian, *Philadelphia, Pa.*
E. E. DeGroffz, *Camden*
Geo. Freehes, *Philadelphia, Pa.*
E. B. Gleason, " "
H. A. Hare, " "
L. M. Halsey, *Williamstown*
J. F. Hamilton, *Philadelphia, Pa.*
James Hunter, *Westville*
Capt. C. McIlvaine, *Phila., Pa.*
Mordecai Price, "
B. T. Shimwell, "
Charles E. Turnbull, "
H. A. Wilson, *Woodbury*

No. members, 12.

SOMERSET COUNTY.

(Society organized May, 1816. Annual meeting last Tuesday in April.)

H. G. Wagoner, *Pres.*, *Somerville*
S. O. B. Taylor, *V.-Pres.*, *Millstone*
J. P. Hecht, *Sec'y*, *Raritan*
W. H. Merrell, *Treas.*, *South Branch*
A. L. Stillwell, *Rep.*, *Somerville*
J. E. Anderson, *Neshanic*
J. B. Beekman, *Pluckemin*
J. H. Buchanan, *North Plainfield*
J. H. Cooper, *Middlebush*
H. V. Davis, *North Branch*
C. R. P. Fisher, *Bound Brook*
I. Fisher, *Harlingen*
T. H. Flynn, *Somerville*
Mary E. Gaston, "
W. H. Long, Jr., "
A. Nelson, *Neshanic*
L. T. Reed, *Somerville*
W. B. Ribble, *East Millstone*
W. J. Swinton, *Somerville*
F. A. Wild. *Bound Brook*
P. J. Zeglio, *North Plainfield*

HONORARY MEMBER.

John W. Ward. *Trenton.*

ASSOCIATE MEMBER.

E. R. Voorhees, M.D.C., *Somerville.*

No. members, 21.

SUSSEX COUNTY.

(Society organized August 22, 1824. Annual meeting third Tuesday in May.)

Bruno Hood, *Pres.*, *Newton*
M. D. Hughes, *V.-Pres.*, *Layton*
S. B. Straley, *Sec'y*, *Andover*
E. Morrison, *Treas.*, *Newton*
T. H. Andress, *Sparta*
L. G. Burd, *Ogdensburg*
Martin Cole, *Hainesville*
Jos. G. Coleman, *Lafayette*
J. P. Couse, *Hamburg*
E. Dalrymple, *Branchville*
C. K. Davison, *Stanhope*
C. E. Dowling, *Sparta*
Chas. M. Dunning, *Coleville*
B. W. Ferguson, *Beemerville*

Jos. Hedges,	*Branchville*	J. B. Pellet,	*Hamburg*
P. N. Jacobus,	*Newton*	J. C. Price,	*Branchville*
J. N. Miller,	"	John Strader,	*Lafayette*
John Moore,	*Deckertown*	S. Voorhees,	*Newton*
J. F. McCloughan,	*Swartswood*	H. D. Van Gaasbeck,	*Deckertown*

HONORARY MEMBER.

Carlos Allen, *Vernon.*

No. members, 24.

UNION COUNTY.

(Society organized June 7, 1869. Annual meeting second Wednesday in April.)

E. B. Grier, *Pres.*,	*Elizabeth*	M. B. Long,	*Plainfield*
J. B. Harrison, *V.-Pres.*,	*Westfield*	Victor Mravlag,	*Elizabeth*
F. A. Kinch, *Sec'y*,	"	C. W. McConnell,	*Cranford*
R. J. Montfort, *Treas.*,	*Elizabeth*	J. K. McConnell,	"
R. B. Whitehead, *Rep.*,	"	T. N. McLean,	*Elizabeth*
F. C. Ard,	*Plainfield*	W. A. M. Mack,	"
F. R. Bailey,	*Elizabeth*	W. H. Murray,	*Plainfield*
W. C. Boone,	*Plainfield*	E. R. O'Reilly,	*Elizabeth*
T. F. Burnett,	*Elizabeth*	Albert Pettis,	*Plainfield*
J. H. Carman,	*Plainfield*	Alonzo Pettit,	*Elizabeth*
W. E. Cladek,	*Rahway*	H. C. Pierson,	*Roselle*
J. Ackerman Coles,	*Scotch Plains*	J. B. Probasco,	*Plainfield*
F. M. Corwin,	*Bergen Point*	S. T. Quinn,	*Elizabeth*
M. E. Clowson,	*Plainfield*	John M. Randolph,	*Plainfield*
Thomas Dolan,	*Elizabeth*	J. P. Reilly,	*Elizabeth*
A. Q. Donovan,	"	F. W. Sell,	*Rahway*
G. W. Endicott,	*Plainfield*	W. U. Selover,	"
J. R. English, Jr.,	*Irvington*	A. Stern,	*Elizabeth*
W. F. Gaston,	*Plainfield*	E. B. Silvers,	*Rahway*
William Gale,	*Westfield*	R. R. Sinclair,	*Westfield*
James S. Green,	*Elizabeth*	G. W. Strickland,	*Roselle*
T. W. Harris	*Springfield*	Charles H. Schlichter,	*Elizabeth*
B. Van D. Hedges,	*Plainfield*	T. H. Tomlinson,	*Plainfield*
E. W. Hedges,	"	W. F. Turner,	"
B. W. Hoagland,	*Woodbridge*	F. Van Horn,	"
H. Page Hough,	*Plainfield*	N. W. Voorhees,	*Elizabeth*
T. J. Jackson,	*Springfield*	F. W. Westcott,	*Fanwood*
S. J. Keefe,	*Elizabeth*	N. L. Wilson,	*Elizabeth*
T. F. Livengood,	"		

No. members, 57.

WARREN COUNTY.

(Society organized February 15, 1826. Annual meeting first Tuesday in June.)

A. P. Jacoby, *Pres.*, *Phillipsburg*
Louis C. Osmun, *V.-Pres.*, *Hackettstown*
Wm. J. Burd, *Sec'y*, *Belvidere*
Wm. H. McGee, *Treas.*, "
J. H. Griffith, *Rep.*, *Phillipsburg*
W. C. Albertson, *Belvidere*
Wm C. Allen, *Delaware*
M. N. Armstrong, *Newton*
Isaac Barber, *Phillipsburg*
H. O. Carhart, *Blairstown*
John S. Cook, *Hackettstown*
G. W. Cummins, *Belvidere*
F. W. Curtis, *Stewartsville*
F. W. Haggerty, *Vienna*
L. B. Hoagland, *Oxford*
John C. Johnson, *Blairstown*
Wm. Kline, Jr., *Phillipsburg*
F. J. La Riew, *Asbury*
L. C. Osmun, *Washington, D. C.*
J. M. Reese, *Phillipsburg*
C. B. Smith, *Washington, N. J.*
Wm. Stites, " "
G. O. Tunison, *Oxford*
Alva C. Van Syckle, *Hackettstown*
Chas. M. Williams, *Washington*

No. members, 25.

SUMMARY.

Atlantic,	28	Monmouth,	37
Bergen,	31	Morris,	49
Burlington,	29	Ocean,	5
Camden,	63	Passaic,	68
Cape May,	16	Salem,	12
Cumberland,	31	Somerset,	21
Essex,	196	Sussex,	24
Gloucester,	24	Union,	57
Hudson,	72	Warren,	25
Hunterdon,	17		
Mercer,	53		879
Middlesex,	21		

TRANSACTIONS

OF THE

MEDICAL SOCIETY OF NEW JERSEY.

ONE HUNDRED AND THIRTY-THIRD ANNUAL MEETING.

HELD AT ALLENHURST, N. J.,

JUNE 27, 28 AND 29, 1899.

C. R. P. FISHER, M. D., OF BOUND BROOK, PRESIDENT.

FIRST DAY—TUESDAY, 27TH.

The meeting was called to order by the President, Dr. C. R. P. Fisher, of Bound Brook, at 3.30 P. M., and the session was opened with prayer by the Rev. Dr. Striker.

Dr. William J. Chandler, the Secretary of the Society, presented the Report of the Committee on Credentials.

The Committee on Credentials respectfully reports that it has examined all the certificates presented by the annual delegates and attests the correctness of the accompanying list.* Your committee regrets that so few of the annual delegates are provided with certificates of delegation, and would call the attention of the district secretaries to this fact.

On motion, the report was accepted.

The next order was the calling of the roll.*

Dr. Henry W. Mitchell, of Asbury Park, then presented the following report of the Committee of Arrangements:

According to my experience, the easiest part of the work of this committee is the making of the report. The Society voted last year to

All reports, papers, etc., marked thus (*) will be found in the Appendix.

meet in the Hathaway Inn, at Deal Beach, and the committee was further authorized to change the place of meeting if for any reason it seemed best. It was found that the Hathaway Inn had no proper meeting place, hence the committee decided to have the meeting as near by as possible, and accordingly selected the present place, which is about two blocks away. The managers of this hotel, the Allenhurst Inn, did not expect a rush, but they have been the victims of prosperity, and now have 158 permanent guests. Three years ago the town of Allenhurst was not in existence, and the place was a mere farm.

This is the fifth occasion on which I have served on this committee, and up to last year there had been considerable friction between the committee and the exhibitors. Last year it was arranged that the exhibitors should pay nothing. This year each exhibitor pays one dollar, in order to defray the actual expenses which last year fell upon the Society. The present plan seems to be very satisfactory and it will probably be the one adopted in the future. After this first session the pavilion on the beach is to be used for the meeting, unless it is found that the surf makes too much noise.

On motion of Dr. Barwis, the reading of the minutes of the last annual meeting was dispensed with, and they were adopted as printed, with a few corrections (relating to the list of Permanent Delegates) verbally made by the Secretary.

Dr. E. L. B. Godfrey moved that the election of permanent delegates be postponed until after the report of the Corresponding Secretary. Seconded. Carried.

Dr. E. Hollingshead asked that as the Chairman of the Business Committee was not present, the report of that Committee should be deferred. It was so ordered.

Dr. Marvel stated that as Chairman of the Committee of Arrangements of the American Medical Association, he would like to introduce a resolution at this time. On motion of Dr. Godfrey, seconded by Dr. A. Mercer, this was permitted.

Dr. Marvel then offered the following:

WHEREAS, The American Medical Association has honored New Jersey for the first time in its history, by selecting Atlantic City for the next place of meeting, it is incumbent upon us to make this occasion a memorable one in the history of our Society; therefore, be it

Resolved, That this Society, the oldest organization of physicians in America, do extend its cordial support to the American Medical Association; and secondly, be it

Resolved, That this Society entertain the American Medical Association one evening during its session, and that a committee of five be appointed, with power to enlarge, and that the Chairman of the Committee of Arrangements of the American Medical Association be made the chairman of this committee.

The resolutions were signed by Drs. Pierson, Smith, Waddington, Hollingshead, Elmer, McAlister and Marvel.

Dr. Marvel stated that he had asked for the meeting of the American Medical Association, *for the State of New Jersey*, and he thought it would be eminently proper for the State Society to join forces with those of Atlantic county in entertaining this representative body of the physicians of the United States. He then moved the adoption of these resolutions, and the motion was seconded by Dr. McAlister.

Dr. Dowling Benjamin asked what would be the probable expense.

Dr. Marvel replied that the expense of the entertainment would depend wholly upon the character of the entertainment, and this would have to be determined by the committee appointed by the Society. The Society should feel that it could trust its committee in this matter. He was under the impression that the By-Laws of the Society prohibited the appropriation of the funds of the Society for such a purpose. He thought the Governor of the State would not hesitate to give assistance, as it

had been customary in all the States in which the American Medical Association had met, for the Governor of the State to entertain the Association one evening. The resolutions just offered provided for increasing the committee if the latter deemed it advisable.

Dr. C. Young thought that, under the circumstances, it would be better for this to come as a recommendation from the State Society to the various county societies, as the State Society had no business to entertain the American Medical Association at all.

Dr. Young then moved, as an amendment, that each county society appoint one member to serve on this commitee. Not seconded.

Dr. Marvel said that the purpose of these resolutions was to have a committee appointed which would represent this State Society, and that the Society should not be looked to individually as a Society, although the entertainment was to be given in the name of the State Society.

Dr. C. Shepherd said that it seemed to him entirely appropriate that the Society should appoint a committee, representing the State Society, and this committee could appoint one from each district medical society, if it seemed best. The fund could be collected by the individual members of the Society, or the district societies could be called upon, if necessary. The money must come from individuals, or from the district societies; the latter seemed to him the proper source.

Dr. William H. Iszard said that he was in favor of the resolutions. He understood that the State Society had a fund of two thousand dollars. It was the rule for by-laws of all organizations to contain a clause forbidding the appropriation of money except for certain purposes, yet it was usually possible to find a way of making

appropriations for other purposes when it seemed proper to the members to do so. Inasmuch as the American Medical Association had agreed to come to the State of New Jersey, it should be the pride and the duty of the State Society to entertain this Association as magnificently as it had ever been entertained in other States. He hoped the resolution would be adopted, and a fund provided for this entertainment without stint.

Dr. Shepherd said that he wished to know definitely if this proposed committee was to be empowered to use the fund of the Society—a fund which had been raised for a specific purpose.

The President replied that that was not possible under the By-Laws.

Dr. Henry W. Mitchell said that this was one of the occasions when State pride should come to the front, and he hoped the State Society would be represented in a suitable manner.

Dr. Godfrey said that this Society was under some obligation to support the people of Atlantic City, as whenever it had gone to Atlantic City it had been liberally entertained, and given free transportation. Moreover, it was not a small matter for a city the size of Atlantic City to entertain the American Medical Assotiation. Dr. Marvel was an exceedingly energetic physician, and would undoubtedly labor indefatigably for the success of the occasion. The State Society of New Jersey had 854 members, and out of this number a sufficient fund should be collected to materially aid Atlantic City in the entertainment of the American Medical Association. The speaker then read the by-law dealing with this subject of the appropriation of funds, and stated that it seemed that the Society had the authority to give a fund, as the by-law distinctly stated that the

Society would pay the expenses of its officers and *committees*. He hoped the resolution of Dr. Marvel would prevail. It should be possible to collect one thousand dollars.

Dr. Godfrey then asked the President for an interpretation of the by-law.

The President ruled that it was impossible to make a direct appropriation, but thought it would be possible for the Society to appoint a committee and pledge itself to pay the expenses incurred by that committee. He thought, however, that it was no more than proper to place some limit on the expense to be incurred.

The Secretary said he thought the intent of this by-law was to limit the expenses to be paid by the Society to those committees specified in the By-Laws.

The President replied that the by-law made no such statement.

Dr. Shepherd said that, to his mind, it was perfectly clear that this Society had no right to use this fund for that purpose. To his own personal knowledge the Society had twice decided that the fund in the treasury had been raised for a specific purpose, and could not be used for any other purpose than that for which it had been obtained.

Dr. Halsey said that the resolutions should prevail because they stated distinctly that the Society had no right to directly appropriate any money; hence the latter was an outside question.

A vote was then taken, and the resolutions were unanimously adopted.

Dr. H. W. Elmer, the Chairman of the Committee on Ethics and Judicial Business presented the report of his committee.*

On motion, the report was adopted.

Dr. Archibald Mercer presented the report of the Treasurer.*

After reading the report, the Treasurer stated that there would again be a deficit. Although the Society had $2,550 in U. S. Bonds, paying 4½ per cent., it had been paying 5 per cent. interest on a loan. He, therefore, recommended that the annual assessment on the State Society for the coming year be $3.00 instead of $2.00.

Dr. H. W. Elmer moved that the report of the Treasurer be received, and referred to the Auditing Committee, and that the recommendation of the Treasurer be adopted. Objection being made to this motion, Dr. W. H. Iszard moved to divide the motion, and vote first on the acceptance of the report and its reference to the Auditing Committee. This was done, and the first part of the original motion carried.

The President announced the following as constituting the Auditing Committee: Drs. C. Young, T. H. McKenzie and J. H. Buchanan.

Dr. Elmer then moved that the recommendation of the Treasurer, regarding the increase of the annual assessment be adopted. Seconded.

Dr. Elmer said that as the Society possessed bonds bringing only 4 per cent., and yet was required to pay 5 per cent. on loans, it seemed proper to dispose of enough of the bonds to pay the debts. He had been told that the bonds had been raised for a specific purpose, but what this was he did not know.

Dr. Mercer explained how the Society got in debt. For two years, he said, there had been no assessment on the district societies. There were about $2,500 in U. S. bonds in the treasury. Two years ago the By-Laws had been changed, which prevented these bonds from being

used for any purpose except paying the expenses of the Society. These bonds had always been spoken of as a "trust fund," yet he had looked through the minutes of the Society since 1800 and had been unable to find any mention of these bonds constituting such a trust fund. If such were the case, it was altogether remarkable that the Society should be allowed to use the interest on these bonds for paying the expenses of the Society. The Society had got in debt because the assessments had been stopped, and the expense of publishing the Transactions had increased. Since that time the Treasurer had been authorized to borrow money from year to year to pay the expenses.

Dr. Dowling Benjamin said that it seemed to him that the physicians who were requested to pay this money got full value received. They wanted nice volumes of Transactions, and they got them. As had been stated, the deficit had originated from the fact that the district societies had been relieved for a time from paying the annual assessment. It was no more than right, therefore, that they should be asked to pay up. To him, the assessment seemed exceedingly small for the pleasure, profit and benefit received.

Dr. Wilson, of Woodbury, queried whether it was good business policy to borrow money at five cent., when holding bonds bringing only 4½ per cent. interest.

Dr. Shepherd thought the Society should pay its expenses as they were incurred without borrowing. Some years ago, sufficient had been contributed by the district societies to start a fund, which had been invested with the idea that in time the interest of this fund would pay the expenses of the Society. It seemed to him unwise, therefore, to touch this principal.

A vote was then taken on the motion to adopt the

recommendation of the Treasurer, and it was carried unanimously.

Dr. Mercer, the Treasurer, then recommended that the following bills be paid: Standing Committee, $21.95; Treasurer, $15.54; Corresponding Secretary, $25.31; Recording Secretary, $38.41; Orange Chronicle, $24.75; Stenographer, $65.00. On motion, these bills were ordered paid.

Dr. E. L. B. Godfrey presented the report of the Corresponding Secretary, together with a communication from the New York State Medical Association asking for a Committee of Conference regarding the publication of the new Medical Directory of New York, New Jersey and Connecticut.*

On motion, the report was received.

Dr. Godfrey then moved that the communication from the New York State Medical Association be received, and that a committee composed of members from the upper part of the State be appointed to confer with the Publication Committee in regard to the medical directory. Seconded by Dr. Walter B. Johnson, and carried unanimously.

The President then appointed the following to serve on that Committee: Dr. James S. Green, of Elizabeth; Dr. Archibald Mercer, of Newark, and Dr. T. R. Chambers, of Jersey City.

Dr. Godfrey then moved that the question regarding Permanent Delegates be referred to the Committee on Permanent Delegates. Seconded, and carried unanimously.

In connection with the election of Permanent Delegates, Dr. Chandler stated that the Committee had not yet examined all of the credentials, and asked to be allowed to report later. The request was granted.

Dr. H. G. Taylor reported for the Committee on Honorary Membership and Honorary Degree of Doctor of Medicine, that no name had been submitted to the Committee, and that, therefore, there was no formal report to make. On motion, the Committee's report was received.

Dr. Walter B. Johnson, Chairman of the Business Committee, presented the report of this Committee.*

On motion of Dr. W. H. Iszard, the report was received.

Under the head of Reports of Delegates to, and Reception of Delegates from Corresponding Societies, Dr. Dowling Benjamin said that at the last meeting he had been appointed a delegate to the Maryland State Society. The occasion was the centennial meeting of society, and the programme was particularly elaborate. He had been impressed by their manner of receiving the delegates from corresponding societies. No attention was paid to any delegates from corresponding societies further than at the end of every announcement of entertainments or receptions, all delegates from the corresponding societies were also invited. He did not mean to imply by this statement, however, that the Maryland society had not been hospitable.

Dr. William Pierson moved that the privileges of the floor be extended to Dr. J. Leonard Corning, of New York.

The President then announced the appointment of the following as the Committee on Entertainment of the American Medical Association: Dr. Philip Marvel, of Atlantic county; Dr. William Pierson, of Essex county; Dr. E. Hollingshead, of Burlington; Dr. B. A. Waddington, of Salem; Dr. A. McAlister, of Camden, and Dr. George E. Reading, of Gloucester.

Dr. C. Young reported that the Auditing Committee had examined the books of the Treasurer, together with the vouchers for the receipts and expenditures, and had found them correct and properly balanced. (Signed, Drs. Charles Young, T. H. McKenzie and J. Henry Buchanan.)

On motion, the report was received.

Dr. C. Young presented the report of the Committee on Legislative Action on Bovine Tuberculosis.*

On motion of Dr. McAlister, the report was received, and the Committee continued.

The regular order of business, as announced on the programme, having been completed for that session, Dr. McAlister was granted permission to offer the following, as a proposed amendment to Section 7 of the By-Laws, *i. e.*, in regard to the time of meeting: The Medical Society of New Jersey shall hold its annual meeting in the month of September, at such time and place as shall have been designated at the previous meeting. Under the rules, action was deferred for one year.

On motion of Dr. Chandler, seconded by Dr. Elmer, the order of business was suspended, and the Society proceeded to consider the report of the Committee on the Pollution of Streams. Dr. H. W. Mitchell read the report, in the absence of the Chairman of the Committee, Dr. E. J. Marsh.*

Dr. Godfrey moved that it be received and referred to the Committee on Publication. Seconded and carried.

Dr. W. J. Chandler, as Chairman of Committee on Credentials, then presented the list of nominees for permanent delegates and recommended their election.

On motion of Dr. C. Young, the Society proceeded to the election of Permanent Delegates by counties. Each candidate was elected separately, the Secretary being

instructed by the Society, in each instance, to cast the ballot. In this way the following were elected permanent delegates:

Atlantic—T. Y. Boysen.
Bergen—Daniel A. Currie.
Camden—William A. Davis, Daniel Strock, W. H. Iszard.
Cape May—Randolph Marshall.
Cumberland—S. T. Day.
Hunterdon—Nathaniel B. Boileau.
Middlesex—Charles H. Voorhees.
Morris—Cuthbert Wigg.
Passaic—W. K. Newton, Calvin Terriberry, John L. Leal.
Salem—F. Bilderback.
Sussex—B. W. Ferguson, Sydney B. Straley, E. Morrison.

On motion, the Society adjourned at 5.20 p. m.

EVENING SESSION.

The Society reconvened at 8.30 p. m., at the call of the the President, who then delivered the Annual Address.*

On motion of Dr. W. B. Johnson, the President's Address was received, with the thanks of the Society, and was referred to the Committee on Publication, to take the usual course.

The President then announced the names of the following persons who had been selected by their delegations to serve on the Nominating Committee: Atlantic, Philip Marvel; Bergen, D. St. John; Burlington, W. P. Melcher; Camden, Dowling Benjamin; Cumberland, O. H. Adams; Essex, D. M. Skinner; Gloucester, H. A. Stout; Hudson, M. Lampson; Hunterdon, E. H. Moore; Mercer, T. H. McKenzie; Morris, W. J. Wolfe; Passaic, P. A. Harris; Salem, B. A. Waddington; Somerset, J. P. Hecht; Sussex, B. W. Ferguson; Union, E. B. Grier; Warren, L. C. Osmun.

Dr. L. L. Hand asked whether permanent delegates had a right to be on the Nominating Committee. The President ruled that there was nothing in the By-Laws to prevent permanent delegates from exercising the same rights and privileges as annual delegates.

Dr. J. S. Baer, of Camden, read a paper on the "Treatment of Abortion." It was discussed by Dr. W. H. Ireland and the discussion was closed by Dr. Baer.*

Dr. L. L. Hand, of Leesburg, read a paper, entitled "Epilepsy," which was discussed by Dr. E. W. Hedges, of Plainfield.*

Dr. Walter B. Johnson exhibited and described a new Portable Electro-Magnet that he had devised and perfected. It was discussed by Dr. P. A. Harris.*

Dr. Louis Faugéres Bishop read a paper, entitled "The Diagnosis and Management of Pleurisy with Effusion."*

Dr. D. H. Goodwillie, of New York, had intended to exhibit, in connection with the discussion of this paper, certain models illustrating some of the mechanical problems occurring in the chest, but owing to the lateness of the hour, he asked permission to show them the next day.

Dr. J. Leonard Corning, of New York, read a paper, entitled "Diagnosis of Insanity; Its Methodology."*

On motion of Dr. William Pierson, all the papers read that evening were referred to the Committee on Publication for consideration.

On motion, the Society adjourned at 10.35 p. m.

SECOND DAY—WEDNESDAY, JUNE 28th.

The meeting was called to order by the President at 9.30 a. m., in the beach pavilion of the Allenhurst Inn.

Dr. J. D. McGill, the Third Vice-President, read an

essay on "Traumatic Neurasthenia."* On motion, the essay was allowed to be discussed.

Dr. W. B. Johnson here moved that the privileges of the floor be extended to Dr. W. M. Leszynsky, of New York, and to Dr. Charles P. Noble, of Philadelphia, a delegate from the Pennsylvania State Medical Society. Seconded by Dr. P. A. Harris, and carried.

The essay of Dr. McGill was then discussed by Drs. J. Leonard Corning, W. M. Leszynsky, Mortimer Lampson, C. P. Noble, and the discussion was closed by Dr. McGill.

Dr. John Bruyere, of Trenton, read an essay, entitled "The Progress, Problems and Prospects in Medicine."*

Dr. C. Sheppard moved that this paper be referred to the Committee on Publication, and that it be published in full in the Transactions. Seconded, and carried.

On motion of Dr. Chandler, the regular order of business was suspended to allow of the following statement being made:

Dr. H. R. Baldwin said that he was one of those who had originated the prize essay movement in 1882. Of the original members there remained only Drs. S. H. Pennington, John C. Johnson, Franklin Gauntt. H. R. Baldwin, J. S. Cook and Alexander W. Rogers. The speaker then read the original conditions imposed. In 1896 the method had been changed by the Society and the Prize Essay Committee, but not by the Fellows, as it should have been, and consequently this action was irregular. The subjects had been selected by the authors of the essays, instead, as originally intended, by the Committee. The Fellows had met that morning, and had regularly selected as the subject for the coming year, "Hydrophobia." It was open to all members of this Society, and would be sent down to the district societies.

Dr. Baldwin then proposed as an amendment to the By-Laws, the rescinding of Section 15, Chapter II, of the By-Laws, applying to this matter of the Prize Essays. (Laid over for one year.)

Dr. Alexander Marcy, of Riverton, then read a paper on "Cyclic Vomiting." It was discussed by Drs. Henry Chavanne, Charles P. Noble and Geo. B. Philhower, and the discussion was closed by Dr. Marcy.*

Dr. John C. McCoy, of Paterson, read a report of "Two Cæsarean Sections upon the same Patient," which was discussed by Drs. A. L. Stillwell, P. A. Harris and C. P. Noble.*

Dr. H. W. Elmer presented the report of the Standing Committee.*

The report on "Progress in Medicine and Therapeutics," by Dr. W. H. Iszard, was read by title.

Dr. Dowling Benjamin presented the report on the "Progress in Surgery." Discussed by Dr. William Pierson.*

Dr. T. W. Corwin presented the report on the "Progress of Diseases of the Nose and Throat."*

Dr. T. C. Ard, of Plainfield, presented the report on the "Progress in Diseases of the Eye and Ear."*

Dr. E. C. Baldwin presented the report on the "Progress in Bacteriology."*

Dr. D. H. Goodwillie, of New York, gave an "Exhibition of Prepared Models of Lungs to Illustrate Diseases of the Chest."*

On motion, the Society adjourned at 1.10 p. m.

AFTERNOON SESSION.

The Society reconvened at the call of the President at 3.30 p. m.

Dr. A. W. Taylor, of Beverly, read an essay, entitled, "Circumcision—Its Moral and Physical Necessities."*

Dr. W. J. Chandler, the Chairman, presented the report of the Committee on By-Laws relating to Permanent Delegates.* On motion, the report of the Committee was unanimously adopted.

Dr. W. B. Johnson then moved that the By-Laws now stand as amended by the Committee and adopted by the Society. Seconded, and carried unanimously.

Dr. Walter B. Johnson, the Chairman of the Committee on the Medical Inspection of Schools, presented this report.*

Dr. Dowling Benjamin moved that the report be received. Seconded, and carried.

Dr. Benjamin then moved that the recommendations contained in the report be adopted. Seconded, and carried unanimously.

Dr. W. J. Chandler moved that the Committee be continued, and be empowered to carry out their recommendations. Seconded, and carried.

Dr. D. C. English, the Chairman, presented the report of the Fellow's Prize Committee. He stated that but one paper had been received, and that one had great merit, but the Committee felt compelled to advise that no prize be awarded therefor.

On motion, the report was received.

Dr. Baldwin, on behalf of the Committee on Dr. Newton's Paper, said that he had received word from Dr. R. C. Newton that he had been unable to do anything with this report, and suggested that the Committee be reorganized, with Dr. Chandler as Chairman. Dr. Chandler asked to be excused.

On motion, the same committee was reappointed, with authority to appoint its own Chairman.

Dr. T. Y. Sutphen, Chairman, presented the report of the Committee on the Abuse of Medical Charity.*

Dr. Sproull moved that the report be received, and the recommendation adopted. Seconded by Dr. J. C. Young.

Dr. Godfrey said that he hoped the recommendation would not be adopted. If this Society sent a recommendation to the legislature it would be done with the expectation that it would be acted upon favorably. He doubted very much if any member of the legislature could be prevailed upon to vote for a bill which would cripple the privileges of any citizen applying for medical aid; it would certainly bring him into disrepute among the members of his own constituency. For this reason, the recommendation would not be adopted by the legislature, and the Society would be placed at a disadvantage as regards its future usefulness.

Dr. Walter B. Johnson said that he was not entirely in accord with all of the statements made in the report of the Committee; nevertheless, he did not think that Dr. Godfrey's objection could be entirely sustained, for we had before us the example of the New York State Legislature. The presumption was that the members of the legislature of that State felt as deeply indebted to their constituents as the legislators of New Jersey. He believed that the State of New Jersey could do as much as New York State, and might stand even a little in advance of the Empire State in the matter of passing good laws; they certainly always had had that reputation and he hoped they would keep it. Regarding the matter of curtailment of privilege, he believed that if the privilege was wrongly given, it was well that it should be curtailed. The privilege of a citizen who is able to pay for medical services to secure such services free of charge

was not a benefit, but an evil to that person. There was no need of having such patients come to the clinic in order to secure sufficient material for purposes of instruction. The Business Committee had offered for discussion at the next annual meeting the question as to how much the charitable clinic interfered with the revenue of the physician. In his own clinics in the City of Paterson, it was an invariable custom to personally register all patients applying for treatment, and to ask each one whether his circumstances were such that he could afford to pay a physician. If they replied in the affirmative, they were informed that they could not be treated in that institution. If they said that they were not able to pay, and yet were able to do so, they were liars, and they would beat you in your office, any way. For this reason he doubted whether the private physician would gain much by shutting these persons out of clinics and dispensaries. He believed that the State of New Jersey stood ready to make laws which would be good and effective, and he believed that if laws of this character could be framed for legislative enactment that it would be beneficial.

Dr. Shepherd said that this was a matter of growing evil could not be doubted, but just how to control it wisely and well was important. We should make haste slowly in this matter until there was something more clearly defined to act upon than a mere suggestion that the legislature should be appealed to for the enactment of a law to control the people who apply for charity, and the people who give for the support of it. He had been practicing medicine for thirty eight years and had been grossly imposed upon by the public in many instances. He had been connected with a hospital for a great many years, and knew that the hospital authorities and those

who had contributed to its support had been just as grossly imposed upon; nevertheless, he did not see his way clear to apply to the legislature for a law to govern him as an individual and protect him in his rights, or protect these charitable institutions and so regulate this matter that they might know whom to receive and whom to reject unless they paid. It must, after all, be left largely to the discretion of the authorities of these institutions. Day by day he had read the report of the Comptroller of the City of New York, who was investigating this matter, and he stated that that city contributed five million of dollars for charitable purposes, and the State of New York, twenty million dollars. In New York city there was one pauper to the one thousand of population. Last year, 72 per cent., according to his statement, had applied in the City of New York for medical charity. When was this abuse to stop and how was it to be regulated? In all of our institutions people came and received board, protection, nursing and the very best of medical skill, who were just as well able to pay the physician and pay for their board and medicine as he was himself. How this was to be regulated by law he could not yet understand. Unless this Society thought it could formulate a law which would govern and control this matter wisely and well, it would not be advisable to ask the legislature to enact such a law. The Society should not ask for legislation until able to clearly specify and formulate the measure which would surely be a permanent benefit to the citizens of New Jersey. So far he had not been satisfied that the Society was able to do this. He was willing that the Committee should be continued, and investigate the matter further.

Dr. D. C. English said that he was in full accord with the sentiments expressed by Drs. Godfrey and Shepherd.

The Society should not ask for legislation until able to say that it was sure that the proposed measure would be a benefit to the public of New Jersey.

Dr. English then moved that this report be laid on the table until the next annual meeting, in order that the proposed discussion on this subject might give new light. Seconded.

Dr. Sutphen was allowed to explain that the idea of the committee had not been to rush this matter before the legislature immediately, but to have it referred to a committee for the coming year, during which time the result of the legislation in New York State could be studied.

The motion to table was then carried unanimously.

Dr. W. B. Johnson moved that the Committee be continued, with the request that a supplementary report be made at the next meeting, which might contain copies of such laws as the Committee deemed suitable for this purpose. Seconded, and carried unanimously.

Dr. Sutphen then presented a supplementary report of the same Committee, regarding yearly contracts by physicians.*

Dr. D. Warman moved that the report be received, and its recommendation adopted. Seconded, and carried unanimously.

Dr. A. W. Taylor, Chairman of the Committee on Apportionment of Essays, offered the following resolution in the place of the one offered in 1898:

Resolved, That the Corresponding Secretary be directed to request each year, the county societies, taking them in rotation as they stand in the published Transactions, to designate one of their number to read a paper before the State Society at its next meeting; and that the county societies shall, in this manner, be notified every year through their secretaries as soon as possible after the annual meeting

of the State Society. The county societies thus notified shall, as soon as possible, and before the first of January of the following year, notify the Secretary and Chairman of the Business Committee of the men appointed, and, if possible, the subject of the paper. This resolution shall not in any way interfere with the presentation of voluntary papers, essays, reports, etc.

Dr. Godfrey moved that the resolution be referred to the Business Committee. Seconded.

Dr. Chandler said that last year it had been desired to have essays from different parts of the State, and accordingly the suggestion had been made that a different system should be adopted. A resolution was then offered, for which the present one was considered a good substitute.

Dr. Taylor explained that at least one Society in the State had not been heard from for at least three or four years. The idea had been that each district society should take part, and it was believed that this would enhance the interest in the work of the State Society and increase the attendance. The resolution drawn up last year had been hastily prepared, and did not cover the ground properly.

Dr. P. A. Harris suggested that it would be sufficient to publish in the volume of Transactions a statement as to the desire of the State Society that the various district societies should participate. A vote was then taken, and the motion was lost.

On motion of Dr. Sproul, seconded by Dr. Chandler, the report of the Committee was adopted as read.

Dr. David Warman, of Trenton, discussed the question proposed by the Business Committee, "To What Extent is the Code of Ethics of the American Medical Association in Operation Today?" in a paper, entitled, "Quackery in the Regular Profession."*

Dr. William J. Atkinson, of Paterson, read the "Report of the Case of Tumor of the Brain Affecting the Optic Chiasm." It was discussed by Drs. W. M. Leszynsky, of New York, and Judson Daland, of Philadelphia.*

Dr. Norton L. Wilson, of Elizabeth, read a paper on "Acute Otitis Media." It was discussed by Drs. T. C. Ard, C. Kenneck, D. H. Goodwillie and Judson Daland, and the discussion was closed by Dr. Wilson.*

Dr. Henry Chavanne, of Salem, considered the question, "Does Medicine Cure?"*

On motion, the Society adjourned at 6.00 p. m.

A dinner at the Allenhurst Inn, attended by the delegates, their families and invited guests, took the place of the evening session.

THIRD DAY—THURSDAY, JUNE 29TH.

The meeting was called to order by the President, at 9.30 a. m.

Dr. E. J. Ill reported "A Case of Nephrectomy and Resection of Ureter for Tuberculosis."*

A paper by Dr. Disbrow, entitled, "A Municipal Molech," was read by title.*

Under the head of miscellaneous business, the Secretary reported that he had received reports of membership from all the district societies with the exception of Ocean county. The latter had sent a report to the Treasurer, but had failed to report to the Secretary as required by the By-Laws. Cape May, Middlesex and Passaic counties had failed to send their membership lists as early as required by the By-Laws.

Dr. A. I. Hunt offered the following resolution:

Resolved, That the thanks of the Society are hereby extended to the management of Allenhurst Inn for the attention received by the members, and the special arrangements made for their comfort and pleasure. Seconded, and carried unanimously.

Dr. Dowling Benjamin, the Secretary of the Nominating Committee read the report of this Committee.*

On motion of Dr. H. W. Mitchell, the report was received and adopted.

Dr. Godfrey asked to withdraw from the Committee of Arrangements in favor of Dr. Charles Young. Request not entertained.

Dr. Reading moved that Dr. Sproul be authorized to cast the ballot of the Society for the list of officers, committes, etc., as read. Seconded, and carried. They were declared by the President duly elected.

Dr. Reading said that in view of the fact that Atlantic City had been selected for the next place of meeting, and at the time of the meeting of the American Medical Association, he would move that the *special committee* on *providing entertainment* for the *American Medical Association* be authorized to expend a sum, from the funds of the Society, not exceeding $2.500, in entertaining the American Medical Association at its next meeting, to be held in Atlantic City. Seconded.

Dr. Mitchell said that it seemed very impolitic for this Society to undertake to entertain the American Medical Association, and only half do it. It had been proposed to raise the necessary fund by subscription, but from conversation with others he had learned that there was a serious doubt as to the ability of the committee to obtain the necessary amount in this way. It had, therefore, been proposed that all of the money to be raised by the assessment of three dollars, which would be about $2,400, should be devoted to this use, and that the

expenses of the Society for the coming year be borne by the fund.

Dr. W. B. Johnson inquired what would be the probable expense of the one-day meeting next year.

The Treasurer replied that the ordinary expenses, exclusive of the publication of the Transactions, were about $150, and it was probable that the Transactions could be printed next year for about half the ordinary amount—say, $600 or $700.

The President asked for an expression of opinion on this matter from the members of the special entertainment committee.

Dr. Reading, one of the members of this committee, said that Dr. Mitchell had certainly voiced his own sentiments so far as he had gone. If the Medical Society of New Jersey could not entertain the American Medical Association handsomely, it would be better for the Society to stay away from Atlantic City at that time. He, for one, would not be a party to any scheme which would not properly entertain the American Medical Association. From conversation, he had become convinced that the lowest amount required would be one dollar per head, or a total of at least $2,000.

Dr. L. L. Hand said that he did not see how any definite conclusion as to the probable expense could be reached at present. As a special committee had already been appointed to attend to this matter, it seemed that the Society could trust this committee to do the right thing. He, therefore, objected to putting any restrictions as to the amount to be expended.

Dr. E. Hollingshead said that between seventeen and eighteen hundred physicians were registered at Columbus meeting, and about five or six hundred others, members of their families, had also been in attendance, bringing

the total to about 2,500. The general sentiment of the people out West was that there would be from two to three thousand at the meeting in Atlantic City. He hoped there would be nothing in the resolution to prevent the committee from expending as much money as seemed to be needed.

Dr. Benjamin said that he did not think the Society should attempt to entertain the American Medical Association, for a number of reasons. In the first place they could not very well reciprocate, and we should not place the Association in that position. In the next place such a thing was not done by other State societies. Take, for example, the Pennsylvania Medical Society, which was a rich society; it did not undertake to entertain the American Medical Association. Atlantic City was thoroughly qualified to provide the necessary and proper entertainment.

Dr. Hollingshead replied that it was the intention of the University to entertain one evening, for Jefferson College to entertain another evening, and for the State to entertain a third evening. When the invitation to the Ameriean Medical Association to meet in Atlantic City was given, it was not extended in the name of the people of that city, but in the name of the people of New Jersey, and it, therefore, seemed proper that they should entertain the Association.

Dr. Archibald Mercer said that it was a very easy matter for the Society to vote to use two or three thousand dollars for the purpose of entertaining the American Medical Association, but this was contrary to the By-Laws. The money could only be used for certain purposes, viz.: the publication of the Transactions, the other publications ordered by the Society, and for the expenses of the officers and expenses of the committees.

Dr. Reading said that he had based the estimate given on the average attendance of two thousand persons at the meetings of the American Medical Association. The committee did not intend to confine itself to the money appropriated by the Medical Society of New Jersey—some money had been already pledged from outside sources. With the amount asked for from this Society a proper entertainment could not be given, but with the additions from other sources it would be possible. The By-Laws distinctly stated that the expenses of the committees could be paid by the Society. This Committee on Entertainment was a regular committee of the Society, and hence its expenses could be paid by the Society without violating the provisions of the By-Laws.

Dr. Shepherd said that he earnestly hoped that this Society would be governed entirely by the remarks made by the Treasurer. The Society should not place itself in the position of clearly and defiantly violating its own Constitution and By-Laws. If by-laws and constitutions could be violated at will, then they were of no use. If there were no fund for this special purpose—and it was clear that there was not—then the proper arrangements should be made for obtaining the requisite amount. This could be done by additional annual assessments, or, if necessary, by still further increasing the annual assessment. If the fund of the Society could be touched in this manner then there was no security whatever. The amount needed could be raised by assessments upon the various district societies of the State, which would be lawful.

Dr. Godfrey said that he believed the committee, under the Constitution, had no right to use the three dollar assessment for the purpose of entertaining the American Medical Association. A great opportunity was presented

for the Medical Society of New Jersey. If it gave a a proper reception to the visiting physicians of the United States, and this was supplemented by the State authorities and by the various colleges and universities, these visitors would go away with an excellent impression of the profession of the State of New Jersey. Eight thousand persons could be entertained on the pier at Atlantic City. The Pennsylvania railroad had taken this Society free of charge in almost every instance that it had met at Atlantic City, and at one time the people there had expended fifteen hundred dollars for the entertaiment of the members of the Medical Society of New Jersey; hence, there was every reason why this Society should properly aid the people of Atlantic City on this important occasion.

Dr. Chandler called attention to the following by-law: "None of the moneys of the Society shall be voted for any purpose whatsoever, except the work of the Society, namely: expenses connected with the annual meeting, for the publication of the Transactions or other publications ordered by the Society, and the expenses of its officers and committees." Under the name "committee," one had no right to include any committee except those enumerated in the By-Laws. This Society did not father all of the many committees appointed from time to time. This whole matter should be referred to the individual district societies, which had the right to raise any amount of money that they could obtain. He believed this was the only lawful and constitutional way by which the money could be raised.

After again reading the motion, a rising vote was taken. There were eighteen affirmative, and twenty-six negative votes; accordingly, the motion was declared lost.

Dr. Walter B. Johnson said that now that the motion

had been lost, he wished to place himself on record as in favor of obtaining money for the entertainment of the American Medical Association at Atlantic City. He saw no reason why the Medical Society of New Jersey should not do this, and many reasons why it should. It was very difficult for the committee to collect money from individuals and also from district societies. He could not suggest any way out of the difficulty.

Dr. Reading announced that he would resign absolutely from any committee connected with the next annual meeting, for he would not go begging around the State.

Dr. Waddington also tendered his resignation from the committee, because, he said, he was sure that the money could not be raised from individuals or from the district societies.

Dr. Benjamin said that he had made the statement that the Society was not compelled to do this, yet he felt that the American Medical Association should be properly entertained, and that the expenses should be met in a proper way. He then moved that an assessment of one dollar per member of this Society be made, to furnish the money. Not seconded.

Dr. Parry said that he had voted against the appropriation of the money because he considered it clearly unconstitutional. He then moved that an assessment on the district societies for the coming year be reconsidered, and that the district societies be requested to raise the money for the use of this committee, and that they need raise no money for the State Society this year. Seconded.

Dr. Shepherd said that he was exceedingly sorry that expressions of disloyalty to this Society had been made at this session, and that every member of the medical profession in New Jersey was not strictly loyal to the Medical Society of New Jersey. This Society certainly

had no means of raising funds except by individual contributions through the district societies. When a request was made to these societies for a purpose so honorable and noble he could not believe that they would refuse to meet the demand, and raise a sufficient fund for entertaining the American Medical Association in a proper manner. He hoped the motion just made would prevail.

The motion was then divided, and the part moving a reconsideration of the assessment was put to a vote, and was carried unanimously.

It was then moved, that three dollars per capita be paid to the Treasurer of the Special Entertainment Committee, and that no other assessment be placed upon the district societies during the coming year. This was carried unanimously.

Dr. Reading then withdrew his resignation from the Entertainment Committee.

On motion, the Society adjourned at 10.30 a. m., *sine die*.

WILLIAM J. CHANDLER,

Recording Secretary.

APPENDIX

TO THE

MINUTES.

APPENDIX TO THE MINUTES.

REPORT OF THE CORRESPONDING SECRETARY.

CAMDEN, N. J., June 27, 1899.

To the Medical Society of New Jersey:

The Corresponding Secretary respectfully reports that he has attended to the duties devolving upon him during the past year. The Transactions of this Society have been forwarded to the Secretaries of the various State and Territorial Medical Associations, which number 48, to the Honorary Members of this Society, to the State Library, the New Jersey Historical Society, the libraries of Princeton University and Rutgers College, the American Medical Association, the New York Academy of Medicine, the College of Physicians, of Philadelphia, the Boston Medical Library, the New Hampshire State Library, the library of the Surgeon-General's office, U. S. A, the library of the Camden City Medical Society, and to the various hospitals throughout the State.

In return, the Transactions of the Medical Associations of Arizona, Alabama, Connecticut, Delaware, Georgia, Illinois, Iowa, Maine, Missouri, Massachusetts, New York, New Hampshire, North Carolina, North Dakota, Oregon, Rhode Island, Texas, Tennessee, Vermont, Washington, West Virginia, Wisconsin, and the Transactions of the College of Physicians, of Philadelphia, have been received. These Transactions have been forwarded for deposit in the State Library at Trenton, and, in view of the large number of medical books already in the library and the annual increase, it would seem advisable to elect a librarian for the Society, resident in Trenton.

Because of the misunderstanding among the various District Societies, in regard to the nomination of Permanent Delegates in 1898, arising from ambiguity in the By-laws, the matter, on motion of the Corresponding Secretary, was referred to a committee of five for consideration and report at this meeting. The President appointed the following committee: Dr. William J. Chandler, Dr. Walter B. Johnson, Dr. J. Howard Pugh, Dr. Henry Mitchell and Dr. E. L. B. Godfrey. The report of this Committee will be made in regular order. The Society subsequently decided that the election of delegates nomi-

nated in 1898, whose certificates were not in conformity with the By-Laws, should be deferred until this year, when the prescribed certificates should be in the possession of the Secretary.

In compliance with the provisions of the By-Laws, the Corresponding Secretary addressed the following communication, under date of April 1st, to the Secretaries of the various District Medical Societies:

MEDICAL SOCIETY OF NEW JERSEY,
OFFICE OF THE
CORRESPONDING SECRETARY.

CAMDEN, N. J., April 1st, 1899.

Dr.———, Secretary,
The District Medical Society for the County of———,
———, N. J.

DEAR DOCTOR:—

You are requested to forward to this office, before June 1st, the names of any of your Permanent Delegates who may have resigned, or died, or have forfeited their membership in your District Society since the last meeting of the Medical Society of New Jersey, together with the names and addresses of any Permanent Delegates nominated to fill existing vacancies (By-Laws, Chap. I., Sec. 4).

On account of irregularities in reporting to the State Society last year the nomination of Permanent Delegates by District Societies, I beg to call your attention to the following form of certificate (By-Laws, Chap. I., Sec. 4) required by this Society from each newly nominated Permanent Delegate:

"This is to certify that———, M.D., was nominated for Permanent Delegate to the Medical Society of New Jersey, by the District Society for the County of ———, according to the requirements of the By-Laws of the State Society."

———————, M.D., President.
———————, M.D., Secretary.

Awaiting the favor of your reply before June 1st, I have the honor to remain,

Very truly yours,
———————M.D.,
Corresponding Secretary.

In response to this communication, Atlantic County presents the name of Dr. T. H. Boysen, of Egg Harbor City; Bergen County presents the name of Dr. Daniel A. Currie, of Englewood; Burlington

County Permanent Delegates remain the same; Camden County presents the names of Dr. William A. Davis, of Camden, Dr. Daniel Strock, of Camden, Dr. William H. Iszard, of Camden; Cape May County presents the name of Dr. Randolph Marshall, of Tuckahoe; Cumberland County presents the name of Dr. S. T. Day, of Port Norris; Essex County Permanent Delegates remain the same; Gloucester County Permanent Delegates remain the same; Hudson County Permanent Delegates remain the same; Hunterdon County presents the name of Dr. Nathaniel B. Boileau, of Jutland; Mercer County is entitled to one in place of a member dropped from the rolls for non-attendance; Middlesex County presents the name of Dr. Charles H. Voorhees, of New Brunswick, to fill vacancy caused by death of Dr. John Helm; Monmouth County has taken no action in regard to Permanent Delegates; Morris County presents the name of Dr. C. Wigg, of Boonton; Passaic County presents the names of Dr. William K. Newton, of Paterson, and Dr. Calvin Terribery, of Paterson; Salem County presents the name of Dr. F. Bilderback, of Salem; Somerest County Permanent Delegates remain the same; Sussex County presents the name of Dr. B. W. Ferguson, of Beemerville, other names remain the same; Union County Permanent Delegates remain the same; Warren County Permanent Delegates remain the same.

Respectfully submitted.

E. L. B. GODFREY, M.D.,
Corresponding Secretary.

NEW YORK STATE MEDICAL ASSOCIATION,
M. C. O'BRIEN, M.D., SEC'Y,
161 WEST 122D STREET.

Dr. E. L. B. Godfrey, Corresponding Secretary Medical Society of New Jersey, Camden, N. J.:

DEAR SIR:

I forward to you for presentation to the New Jersey Medical Society the following propositions and explanations:

1. We propose practically to revive the Medical Register of New York, New Jersey and Connecticut, which was popularly known as the "green book," and which was discontinued three years ago, and to issue a new Directory much more complete than the old register. A large part of the copy is already in the hands of the printer. The

publication of the book with the sanction of the three State Associations would surely give it greater stability and make it more attractive to advertisers than the Medical Register, which was published under the auspices of a small, local society of not more than a score of members.

2. We therefore cordially invite the official coöperation of the New Jersey and Connecticut Medical Societies, and respectfully ask if your Society will appoint an Advisory Committee of two or three, as you like, to confer with our Publication Committee on questions in the make-up of the next edition of the Directory, relating to the interests of your Society? In that case, the active members of your Society would probably each receive, gratis, a copy of the Directory through your Secretary or Treasurer, as you may decide, since the required number of copies would be sent by express to the officer appointed by you to receive the package.

3. All we should ask of you in return, would be that you furnish the Publication Committee with a correct list of officers of your State and County Societies, place and time of meeting, etc., and also a list of local medical societies, hospitals, asylums and dispensaries, together with their medical staff and the conditions of the admission of patients.

Such coöperation would be of advantage to all, and since a larger edition than at first contemplated would be required to supply your Society—this fact being made known to advertisers, a greater number of high-class advertisements would be easily secured to defray the expenses, for which, however, New York shall be responsible. If you accept these propositions your Society will be under no expense, neither would be its members individually. The undertaking is for the good of the medical profession. Only one member of the Publication Committee will receive compensation for his very arduous labor in the preparation of the copy.

Yours very respectfully,

MICHAEL C. O'BRIEN, Secretary.

TREASURER'S REPORT.

DR. ARCHIBALD MERCER, *Treasurer*, in account with the Medical Society of New Jersey:

Dr.

July, 1898.	Camden County Additional Payment,	$8 00
"	Middlesex " "	4 00
"	Morris " "	16 00
Dec., 1898.	Loan Howard Savings Institution,..	725 00
June, 1899.	Atlantic County Assessment.	56 00
"	Bergen " "	62 00
"	Burlington " "	58 00
"	Camden " "	126 00
"	Cape May " "	34 00
"	Cumberland " "	62 00
"	Essex " "	392 00
"	Gloucester " "	44 00
"	Hudson " "	146 00
"	Hunterdon " "	34 00
"	Mercer " "	106 00
"	Middlesex " "	38 00
"	Monmouth " "	70 00
"	Morris " "	96 00
"	Ocean " "	10 00
"	Passaic " "	136 00
"	Salem " "	24 00
"	Somerset " "	42 00
"	Sussex " "	46 00
"	Union " "	114 00
"	Warren " "	50 00
Interest on U. S. 4% Bonds.....		102 00
To Cash Balance in Bank, June, 1898.....		1,728 06
To U. S. Registered Bonds.....		2,550 00
		$6,879 06

Cr.

1898.		
June.	By paid H. W. Elmer, Standing Committee.	$20 00
"	" E. L. B. Godfrey, Cor. Secretary..	20 08
"	" Henry Mitchell, Chairman.....	5 50
"	" W. J. Chandler, Rec. Secretary...	28 24

June.	By paid	The Orange Chronicle.....	$25 00	
"	"	A. Mercer, Treasurer.....	11 38	
July.	"	Howard Savings Institution, Note of $1,000, with interest.....	1,047 50	
"	"	Howard Savings Institution, Note of $105.00, with interest.....	108 32	
"	"	W. J. Chandler, Rec. Secretary..	15 97	
"	"	Dr. O. C. Ludlow, Stenographer.	65 00	
Sept.	"	The Orange Chronicle.....	7 75	
Oct.	"	L. J. Hardham, Transactions....	300 00	
Dec.	"	L. J. Hardham, Transactions ...	856 75	
				$2,511 49
June, 1899.	By Cash Balance in Bank.....			1,817 57
"	By U. S. Registered Bonds...			2,550 00
				$6,879 06

Respectfully submitted,

ARCHIBALD MERCER,
Treasurer.

REPORT OF THE COMMITTEE ON BUSINESS.

Gentlemen of the Medical Society of New Jersey:

The Committee on Business, in making its annual report, is pleased to announce that in colaboration with the Committee of Arrangements it has been able to provide for the omission of the Wednesday evening session and arrange for an annual dinner, which, it is hoped, will be so successful that similar entertainments may be held at every annual meeting. The printed programme is presented for your consideration. The committee has endeavored to distribute the scientific work of the Society throughout the State, but have only been partially successful, as they have not been able to secure essays, nor have a sufficient number volunteered to prepare papers, report cases or present pathological specimens to fully meet the scientific requirements of the annual meeting of the Medical Society of New Jersey.

The committee recommend that the time limit upon all papers be strictly enforced, also upon the time allowed for discussion of papers and the ordinary business questions incident to the progress of the

meeting. W. B. Graves, M.D., of Orange, having been appointed one of the essayists, has been excused at his own request, and an essay will be presented by John Bruyere, M.D., of Trenton, N. J. John C. McCoy, M.D., of Paterson, N. J., will report the following cases under the head of papers approved by the Business Committee: (*a*) "Two Cases of Ruptured Tubal Pregnancy"; (*b*) "A case of Esophagotomy for Foreign Body, located by the Fleuroscope." William S. Disbrow, M.D., of Newark, N. J., will present a voluntary paper, entitled "A History of Newark's late Epidemic—Typhoid." James M. Stewart, M.D., of Paterson, N. J., will continue the discussion upon the ethical subject. Dr. J. Leonard Corning will present a paper, "The Diagnosis of Insanity, Its Methodology," this evening, following the paper of Dr. Bishop. The committee hopes that the discussion upon the ethical question proposed for this year will be harmonious and that the question will be treated from a purely ethical standpoint.

The question proposed for next year's discussion is, "To What Extent does the Charitable Clinic curtail the Revenue of Medical Practitioners?"

The following resolutions, adopted by the Medical Society of Pennsylvania and presented at the June meeting of the American Medical Association, are presented for your consideration:

Resolved, That it is the opinion of the Medical Society of the State of Pennsylvania, that opticians are not qualified by their training, or are they legally qualified, to perform the work of the oculist, and they should not be the consultants of regular physicians. Further, it is

Resolved, That all physicians are requested to call their brother physicians in consultation, thus discountenancing the growing pretences and assurances of the optician and his brother, the graduate optician, or, as he is beginning now to call himself, the "Ophthalmotrician."

The Business Committee hopes that the committee appointed for the purpose of suggesting some method of procedure which will result in a more general distribution of the scientific work of the Society, will be successful, and urge the desirability for next year of early application for position on the programme.

Respectfully submitted,

WALTER B. JOHNSON, *Chairman*,
E. HOLLINGSHEAD.

REPORT OF COMMITTEE ON CREDENTIALS.

The annual delegates producing certificates as required by the By-Laws (Chap. I., Sec. 8), are as follows: *Camden*—S. G. Bushey, J. S. Baer; *Cumberland*—O. H. Adams, E. Stites; *Essex*—L. L. Hinckley, C. D. Bennett, W. H. Warren, W. H. White; *Gloucester*—H. A. Wilson, S. F. Ashcraft; *Morris*—W. J. Wolfe; *Salem*—W. H. Carpenter, Henry Chavanne; *Somerset*—J. H. Buchanan; *Sussex*—M. D. Hughes; *Union*—S. T. Quinn, J. S. Green, E. B. Grier. Many other delegates were present but failed to produce their certificates.

FELLOWS PRESENT.

John C. Johnson, Franklin Gauntt, Henry R. Baldwin, Alex. W. Rogers, P. C. Barker, John W. Ward, H. Genet Taylor, John G. Ryerson, O. H. Sproul, T. J. Smith, David C. English.

OFFICERS PRESENT.

President, C. R. P. Fisher; First Vice-President, Luther M. Halsey; Second Vice-President, William Pierson; Third Vice-President, John D. McGill; Corresponding Secretary, E. L. B. Godfrey; Recording Secretary, William J. Chandler; Treasurer, Archibald Mercer.

PERMANENT DELEGATES PRESENT.

Burlington—J. Howard Pugh, N. Newlin Stokes, A. W. Taylor; *Camden*—Alexander Marcy, James M. Ridge, Duncan W. Blake, Onan B. Gross, William H. Ireland; *Essex*—Arthur Ward, Charles Young, Joseph C. Young, George Bayles, William J. Chandler, Edward J. Ill, George R. Kent, Daniel M. Skinner, Joseph D. Osborne, William Rankin, George A. Van Wagenen, James T. Wrightson; *Gloucester*—George E. Reading, George C. Laws; *Hudson*—J. D. McGill, Robert F. Chavert, J. A. Exton; *Hunterdon*—Isaac S. Cramer, W. S. Creveling; *Mercer*—Cornelius Shepard, R. R. Rogers, Sr., David Warman, Elmer Barwis; *Middlesex*—Ambrose Treganowan; *Monmouth*—Henry Mitchell; *Morris*—I. W. Condit, Levi Farrow; *Passaic*—W. B. Johnson, P. A. Harris, George H. Balleray; *Salem*—B. A. Waddington; *Somerset*—S. O. B. Taylor, J. P. Hecht; *Union*—Alonzo Pettit, E. B. Silvers, J. Ackerman Coles; *Warren*—William H. McGee.

Of the newly elected Permanent Delegates there were present the following: *Atlantic*—T. H. Boysen; *Bergen*—D. A. Currie; *Camden*—Wm. A. Davis, Daniel Strock, Wm. H. Iszard; *Cumberland*—S. T. Day; *Passaic*—W. K. Newton; *Sussex*—B. W. Ferguson.

ANNUAL DELEGATES PRESENT.

Atlantic—Philip Marvel; *Bergen*—D. St. John, W. S. Vroom, J. J. Haring, J. W. Proctor, rep.; *Burlington*—E. Hollingshead, J. W. Hollingshead, J. E. Dubell, J. J. Flynn, Wm. P. Melcher, Emma R. Weeks, A. Marcy, Jr., F. G. Stroud; *Camden*—D. Benjamin, S. G. Bushey, J. S. Baer, A. McAlister; *Cumberland*—O. H. Adams, D. H. Oliver, E. Stites, L. L. Hand; *Essex*—L. L. Hinckley, J. H. Bradshaw, G. B. Philhower, C. D. Bennett, W. H. Warren, W. H. White, A. Wickman, A. K. Baldwin, D. W. Smith, T. Y. Sutphen, T.W. Corwin; *Gloucester*—H. A. Wilson, S. F. Ashcraft, H. A. Stout; *Hudson*—T. R. Chambers, J. M. Rector, G. E McLaughlin, H. Spence, J. C. Parsons, M. Lampson, G. C. Kilgore, S. A. Helfer. U. Allen, Alex Dallas; *Hunterdon*—E. H. Moore, A. B. Nash; *Mercer*—T. H. Mackenzie, J. Bruyere, C. F. Adams, A. J. Hunt, B. W. McGalliard, E. C. Baldwin; *Monmouth*—E. W. Crater, E. Field, P. E. Pumyea; *Morris*—A. E. Carpenter, F. W. Owen, B. D. Evans, W. J. Wolfe, C. Anderson; *Ocean*—J. C. Schuerman; *Passaic*—M. A. Mackintosh. J. K. Merrill, S. R. Merrill, W. J. Atkinson; *Salem*—W. H. Carpenter, Henry Chavanne; *Somerset*—L. T. Read, J. H. Buchanan, A. L. Stillwell, rep.; *Sussex*—M. D. Hughes; *Union*—S. T. Quinn, E. W. Hedges, J. S. Green, E. B. Grier, W. A. M. Mack; *Warren*—C. B. Smith, L. C. Osmun.

REPORT OF THE NOMINATING COMMITTEE.

Mr. President and Members:

Your Nominating Committee would respectfully offer the following report:

For President—Dr. Luther M. Halsey, Williamstown.

For First Vice-President—Dr. William Pierson, Orange.

For Second Vice-President—Dr. John D McGill, Jersey City.

For Third Vice-President - Dr. E. L. B. Godfrey. Camden.

For Corresponding Secretary—Dr. E. W. Hedges, Plainfield.

For Recording Secretary—Dr. William J. Chandler, South Orange.

For Treasurer—Dr. Archibald Mercer, Newark.

Place of Next Meeting—Atlantic City, June 4, 1900.

Standing Committee—Dr. H. W. Elmer, Bridgeton; Dr. Henry Mitchell, Asbury Park; Dr. Charles Young, Newark, to take the place of Dr. E. W. Hedges.

Business Committee—Dr. Walter B. Johnson, Paterson; Dr. George A. Van Wagenen, Dr. W. U. Selover, Dr. E. Hollingshead, Dr. T. R. Chambers.

Fellows' Prize Committee—Dr. P. A. Harris.

Committee on Honorary Membership—Dr. H. Genet Taylor, Camden.

Committee of Arrangements—Dr. Philip Marvel, Atlantic City; Dr. E. A. Riley, Dr. B. C. Pennington, Dr. George E. Reading, Woodbury; Dr. E. L. B. Godfrey, Camden.

Delegates to American Medical Association—Dr. B. D. Evans, Morris Plains; Dr. Alexander McAlister, Camden; Dr. William J. Chandler, South Orange; Dr. H. A. Stout, Wenona; Dr. J. W. Ward, Trenton.

Delegates to New York Medical Society—Dr. W. J. Chandler, South Orange; Dr. D. A. Currie, Englewood.

Delegates to Massachussetts Medical Society—Dr. E. B. Silvers, Rahway; Dr. J. A. Exton, Arlington.

Delegates to Pennsylvania Medical Society—Dr. W. H. Carpenter, Salem; Dr. L. L. Hand, Leesburg.

Delegate to Maryland Medical Society—Dr. D. Benjamin, Camden.

Delegate to New Hampshire Medical Society—Dr. Lyman Leavitt, Trenton.

Delegates to Rhode Island Medical Society—Dr. S. A. Helfer, Hoboken; Dr. O. H. Adams, Vineland.

Delegates to Mississippi Valley Society—Dr. Parson, Jersey City; Dr. A. L. Stillwell, Somerville.

Delegates to American Pharmaceutical Association—Dr. W. K. Newton, Paterson; Dr. H. L. Coit, Newark.

Signed. PHILIP MARVEL, *Chairman.*

D. BENJAMIN, *Secretary.*

REPORT OF COMMITTEE ON REVISION OF BY-LAWS RELATING TO PERMANENT DELEGATES.

The Committee appointed by your body last year to revise the By-Laws relating to Permanent Delegates have held this matter under careful consideration, and recommend the following amendments:

(1). Page 15, Chap. 1, Sec. 4, line 6. Instead of "once in three years thereafter," read "and at every third annual meeting thereafter."

(2). Page 16, Chap 1, Sec. 4, line 9. After the words "and their names," insert these words, "after having been announced to the Society by the Secretary, and without any accompanying defense or satisfactory excuse."

(3). Page 16, Chap. 1, Sec. 4, line 14. Strike out the period and add these words, "as evidenced by their failure to register their names in the Registration Book, which shall be provided by the Committee on Credentials at each meeting of the State Society."

(4.) Page 16, beginning at the twentieth line. Strike out the whole paragraph and read as follows: "After the death of a Permanent Delegate or of a nominee for Permanent Delegate, the Secretary of the District Society of which the Permanent Delegate or said nominee was a member shall send proper notice of such death to the Recording Secretary of the Medical Society of New Jersey.

"The names of all Permanent Delegates stricken from the list and the list of all Permanent Delegates or nominees for Permanent Delegates who may have died shall be reported as soon as possible by the Recording Secretary of the Medical Society of New Jersey to the Secretaries of the District Societies which they respectively represented, and the said District Societies may then select at their next annual meeting (or at a special meeting called for that purpose), in manner hereinbefore set forth, members to fill the vacancies."

(5). Page 21, Chap. 2, Sec. 4. Strike out the last sentence, beginning, "He shall keep a record," etc., and add to it Sec. 5, page 22, of the same chapter, (thereby transferring this duty from the hands of the Corresponding Secretary to those of the Recording Secretary).

(6). Page 15, Chap. 1, Sec. 4, line 6. Strike out "1898,' and insert "1900."

(7). Page 16, Chap. 1, Sec. 4. Insert between lines 6 and 7 the following paragraph: "Any District Society which has failed to nominate its full quota of Permaneut Delegates prior to the year 1900, shall be allowed to select at its annual meeting in 1900, in the manner otherwise specified in this section, *additional* nominees sufficient in number to fill the said quota, and the number of said additional nominees shall be ascertained by the Recording Secretary of the Medical Society of New Jersey, and notice thereof sent to the secretaries of the respective District Societies on or before January 1st, 1900. The

names of nominees so selected shall be presented to the Medical Society of New Jersey, for election as Permanent Delegates, at the annual meeting in June, A. D. 1900."

Respectfully submitted,

W. J. CHANDLER, *Chairman*, E. L. B. GODFREY,
W. B. JOHNSON, HENRY MITCHELL,
J. H. PUGH, D. C. ENGLISH.

REPORT OF THE COMMITTEE ON ETHICS AND JUDICIAL BUSINESS.

In regard to the resolution of the District Society of Union County, viz., "that the State Medical Society take such action at its next annual meeting as will be necessary to induce the American Medical Association to strike out in Art. IV., Sec. 1, of the Code of Ethics the words 'whose practice is based upon an exclusive dogma,'" your Committee would report that it is inexpedient for this Society to do so at this time.

The Committee on Ethics and Judicial Business would also report that the following resolutions of the Bridgeport Association were referred to them for action if they saw fit:

SECTION I.

WHEREAS, The attention of this committee and members of this Society has been called to violations of the spirit of the Code of Ethics and to alleged frequent violations of the letter of the codes; therefore, be it

Resolved, That we earnestly call the attention of the members to the necessity and wisdom of keeping at all times the spirit as well as the letter of ethical relations in all circumstances, and especially in all the increasingly intricate and varied relations occurring between professional brethren. Specifically we would refer to physicians making contracts to attend families, members of lodges, associations or orders at reduced rates per annum or otherwise; therefore, be it

Resolved, That it is the expressed sentiment of this Society that it is derogatory to the dignity of the medical profession, for any regular physician to subscribe to or make any such contract; and further be it

Resolved, That this Society earnestly recommend the cancellation, as soon as practicable, of any existing contract which may be opposed to the spirit of these resolutions.

Resolved, That any member who shall hereafter make or renew any such contract shall be and is hereby declared ineligible to any elective office in this Society.

As to Section 1. As no specific charge is made against any individual member of our Society for violation of the Code, they have no recommendations to offer.

SECTION II.

It having been brought to our attention that some members of our Society are habitually in the practice of making so-called "examinations" for various forms of life insurance, or admission to societies and orders at ridiculously low rates,

Resolved, That the regular fee for the examination of candidates to Mutual Benefit Societies and Industrial Insurance Companies shall be not less than one dollar (this in cases where no urinary examination is required), and that no regular examination of a candidate for ordinary life insuaance. or for candidates to any order or society requiring a urinary examination shall be less than five dollars ($5.00); and further be it

Resolved. That a copy of these resolutions be forwarded to all insurance companies and societies now doing business in this city, and we earnestly recommend and urge that in all cases the examination fee be paid by the company or society, and not by the person examined.

As to Section 2. While it may perhaps may be charitable to include "Mutual Benefit Societies," there appears to be no good reason why "Industrial Insurance Societies" should be accorded a lower rate than any other insurance companies.

SECTION III.

We would further call attention to the acknowledged frequent consultations of regular physicians, members of this Society, with irregulars, or with those adhering or professing to adhere to some "pathy" or so-called system of medicine. This is a practice in itself reprehensible and greatly to be depricated. Therefore we recommend that it be

Resolved, That the attention of the members of this Society be especially called to this matter, to wit: First—That it is derogatory to professional character, hence especially reprehensible in a regular physician. Second—It is in violation of the Code of Ethics of the American Medical Association. Third – It is in direct violation of the repeatedly expressed sentiment of this Association and the By-Laws thereof; therefore, be it.

Resolved, That any member of the Bridgeport Medical Association who shall hereafter be wilfully gnilty of the reprehensible practices outlined in these resolutions, shall be and he is hereby declared to be ineligible to any elective office in this Society.

In conclusion, your committee begs leave to suggest that every individual entering or admitted to the Society becomes at once entitled to all its privileges, rights and immunities, and thereby incurs an obligation to exert his best abilities to maintain its dignity, to exalt its standing, to extend its usefulness, and no less to maintain and protect the honor of each member. It is the duty of each and every member

to be vigilant for the welfare of the Society and ever to be ready to bear each his part in sustaining the burden, no less than enjoying the benefits and pleasures of the Association.

To this end and to promote mutual usefulness, mutual forbearance and to enhance the dignity of medicine as a liberal profession, we beg to recommend the adoption of the foregoing resolutions, and a careful perusal of the Code of Ethics of the American Medical Association.

As to Section 3. We are of the opinion that consultations with irregular practioners is in direct violation of the Code of Ethics of the American Medical Association, and is to be discountenanced.

Signed. H. W. ELMER, *Chairman.*

REPORT OF COMMITTEE ON TUBERCULOSIS IN CATTLE.

At the last meeting of the Committee on Bovine Tuberculosis, the chairman, Dr. Stickler, stated to the gentlemen present, among them several of the Tuberculosis Commission of the State, that he would endeavor to arrange a further conference in the coming October (1898). The conference was never called. Dr. Stickler has died and Dr. Conrow, of Moorestown, another member of the committee, has also recently died. The remaining members of the committee are unable to present to this Society an analysis of the work of the Commission for the past year. We desire to state, however, that at last our profession has been recognized, Dr. John A. Wells, of Englewood, having been appointed a member of the Commission. It is a matter of regret that pressing engagements would prevent his giving proper attention to the business of the Commission. He therefore declined the appointment.

During the last session of the legislature, encouraging progress was made. One enactment "very greatly broadens the work of the Commission." It was entitled "An Act to Prevent Importation of Tuberculous Cattle into New Jersey." Some of its provisions are as follows: Cows must be accompanied by certificate from a veterinarian whose reliability must be certified to that they have been subjected to tuberculin test. Railroad companies are forbidden to carry cattle without such certificate. If cattle are imported, State Tuberculosis Commission shall cause them to be subjected to tuberculin test and animals giving symptoms of tuberculosis shall be slaughtered, no

indemnity being paid. Penalty, $25 to $200 for every offense; second offense, one month to six months imprisonment and fine.

The appropriation for the use of the Commission was increased from $5,000 to $10,000.

All of which is respectfully committed,

CHARLES YOUNG,
HENRY MITCHELL.

REPORT OF COMMITTEE ON ABUSE OF MEDICAL CHARITY.

Your committee, in their study of the existing condition of medical charity in this State, find that free medical aid is rendered as a public service in five counties, viz.: Essex, Hudson, Camden, Passaic and Mercer. In these five counties, according to the annual reports of the dispensaries, over 60,000 new patients are recorded yearly as having received free medical treatment. Of this number, undoubtedly there are some whose names are registered at more than one clinic. These institutions are under the patronage of the support of either the church, the municipality or private individuals charitably inclined. They are governed by boards of management which are in sympathy with those who support the institutions. Large sums of money are subscribed annually for this object. Professional service is rendered gratuitously by competent physicians and surgeons.

In few, if any, is a charge made to patients for this service, and in none is there a satisfactory method for the exclusion of those who are inclined to abuse medical charity. Investigations made in New York city have established the fact that fifty per cent. of all applicants are able to pay a small fee. This probably holds good in our own State, and the medical profession, as well as the citizens at large, are met by the fact that a serious evil exists, inasmuch as it has a tendency to foster pauperism, lower the self-respect of a certain class of the community, misuse the funds so liberally given and work injustice to the medical profession.

The correction of this evil has been undertaken in various ways by many institutions, but no real advance has as yet been made. It has been suggested that the authorities of the dispensaries in any one city might form an organization and employ inspectors whose duty it

should be to investigate the circumstances of the various applicants and so create a black list for all imposters, but this plan has been tried and failed, partly because some institutions would not enter the compact and in part because there was lack of agreement in the proposed action. The idea of compelling each patient to bring a certificate of their need of gratuitous treatment from some physician has been offered, but this also has its objections. Many institutions have made hard and earnest efforts to curtail this charity abuse as far as they could, and some have succeeded in a degree, but the fact remains that having once an imposter to deal with there are no means whatever of excluding such an applicant if he choose to deceive, without a thorough investigation at home, and this is impracticable for any public institution without great expense.

In any step that is taken to arrest imposition, it is extremely difficult to avoid injustice to that class of applicants who are most worthy of charity—reference is made to those who for the time being are more or less destitute and yet whose self-respect will not allow them to humiliate themselves by seeking a certificate of pauperism. These, no doubt, would be forced to ask consideration at the hands of the profession as office charity patients, and what man is there among us who would deny the helping hand to such. But this does not alter the fact that something must be done to regulate, in a degree at least, this growing social evil.

Harmony in any concerted action between institutions with such varied interests seems futile. There appears to be no way for the correction of this evil except through legislation. The many obstacles to be met with in legislative action are apparent to your committee, but it believes that when the facts are brought to the knowledge of the citizens of the State and the influence of the medical profession is employed to impress the importance of action, there will be no objection to the passage of such laws as will not deprive the various institutions of their individual privileges, except for a misdemeanor, nor deny to any needy and deserving patient the requisite medical care.

Your committee has endeavored to ascertain the opinion of the medical profession as much as possible, and while there are many who doubt the utility of State laws in this matter, there are more who heartily believe in their value. Your committee has received resolutions from the District Society of Hudson County, Christ's Hospital, Jersey City, and the Practitioners' Club of Newark, all favoring

legislative action. The success which has crowned the efforts of the medical profession in New York State should stimulate us to make some advance in our own State. In New York State the control of all dispensaries is placed in the hands of the State Board of Charities —a board composed of twelve (12) gentlemen of high order and non-political in their selection, who have the power to revoke the license of any institution which does not follow regulations and rules made by this same board, and the law also makes it a misdemeanor for any person to willfully endeavor to obtain free medical treatment under false representation, and punishable by a fine. The law goes into effect October 1, 1899.

In conclusion, your committee recommends that this Society presents to our State legislature for its approval and adoption such a bill as will make it unlawful for a patient to be treated the second time at any free clinic or dispensary, where a certificate of the applicant's needy condition is not presented, signed by some authorized person or persons, such authorized person or persons to be designated by the District Society of that County.

T. Y. SUTPHEN, *Chairman*,
GEO. H. BALLERAY,
F. D. GRAY,
J. S. BAER.

SUPPLEMENTAL REPORT ON DR. WARMAN'S RESOLUTION.

(See Transactions of 1898, p. 91.)

In the consideration of Dr. Warman's preamble and resolution, your committee fully concurs in the sentiment which it conveys, and would recommend the Society to express its condemnation of this custom so prevalent at the present day, tending as it does to lower the standard of medical dignity and work injustice as it may to the younger members of the profession, but would not approve of the extreme measure indicated by the resolution.

T. Y. SUTPHEN, *Chairman*,
GEO. H. BALLERAY,
F. D. GRAY,
J. S. BAER.

REPORT OF THE COMMITTEE ON MEDICAL INSPECTION OF SCHOOLS.

The committee take pleasure in presenting a report upon the question of the medical inspection of schools, believing that in the very near future some general plan will be adopted which will make universal, at least in the larger cities, the systematic daily visitation and inspection of all schools, by competent medical examiners specially appointed, for the purpose of adopting and regulating hygienic conditions necessary to the physical well-being of the pupils, as well as the prevention of the spread of communicable diseases.

The candidate for the position of medical inspector of schools should be a competent medical practitioner. He should be regularly employed to devote daily attention to the condition of the school house, the arrangement of the armamentarium, the location, distribution and seating of the pupils, and to observe especially the health standard of the schools in relation to the general health of the children under his care. During each inspection of the school, the scholars reported ill should all be carefully examined in quiet, suitably equipped rooms provided for the purpose, and each case disposed of in accordance with the conditions present at such examination. The inspector should regulate the lighting, heating, ventilation, sanitation and general cleanliness of the building, make the necessary physical examinations of all applicants for admission, and at stated intervals examine the eyes and ears of all pupils. He should, in fact, act as the general health officer of the school and instructor in hygiene, not only for the scholars, but also for the teachers.

The medical inspector has, in performing his duty, proved himself to be a very desirable adjunct to municipal boards of health, assisting them in placing, at the earliest possible moment, cases of contagious disease under their jurisdiction, reporting upon the necessity of immediate quarantine at home or isolation in an institution. In this manner, working conjunctly, health boards have assisted the medical inspector by placing in his hand the daily record of the location of premises infected by contagious disease, and by examining at their laboratories inoculated culture mediums and rendering prompt reports to the inspector. The full scientific value of the medical inspection of schools can only be realized by continued preparation of systematic statistical records, which are to be embodied in monthly or

more frequently submitted reports to the governing educational boards.

To medical inspectors of schools, adequate compensation should be made for the services rendered, in order that the officers appointed might be thoroughly competent physicians, able and willing to devote the necessary time to the work. The daily examinations of scholars requiring them, would be of great value and would undoubtedly result in an elevation of the health standard of the schools. Disease would be detected at its onset, treatment could be instituted at once, the diseased conditions responding to treatment in the acute or sub-acute stages would naturally curtail the number of school children affected by chronic diseases. The spread of epidemic and endemic diseases could be almost entirely eliminated by the immediate isolation of the scholar primarily infected, before the pupils of the entire school were exposed to the communicable disease. The physical welfare of all pupils could not fail to be the result of the complete hygienic surroundings which constant inspection would secure. The improvement in the general health standard of the schools would certainly result in a lowering of the average number of days of absence from school work, and thus necessarily be conducive to a higher scholastic attainment.

The result of the favorable conditions obtained by constant inspection would be, the necessity for the employment of only a reasonable number of study hours, either during school hours or at home, and the arrangement of ample recess periods, for it is assuredly a self-evident truth that mental activity is stimulated by good air, good light and agreeable surroundings. The basic principles involved in the medical inspection of schools are, the immediate detection of communicable disease and the adoption of such measures as will prevent the infection of healthy scholars, either through exposure to direct contagion or indirectly through infected school materials or clothing; the adoption of such sanitary and hygienic precautions as will render all of the conditions in school buildings and school life such as to be conducive to the highest physical, mental and moral development of all of the scholars. The committee believes that the general adoption of the medical officer for school inspection can only result from the legislative enactment of school laws upon the same lines as the laws at present in force in the State of Massachusetts, which have also been adopted in New York and other cities. This

year the city of Camden has taken the initiative for the State of New Jersey and have appointed H. H. Davis, M.D., Medical Inspector of Schools at a salary of fifteen hundred dollars a year.

The committee recommends the legislative enactment of laws for the general medical inspection of schools throughout the State, and respectfully suggests that the enactment of such laws be advocated by the Medical Society of New Jersey.

Respectfully submitted,

WALTER B. JOHNSON, *Chairman.*

Exhibition of Prepared Models of Lungs to Illustrate Diseases of the Chest.

BY D. H. GOODWILLIE, M. D., OF NEW YORK.

I wish to make a few remarks in connection with a demonstration of models. My object is to illustrate some points in diseases of the chest which have not been, I think, heretofore entirely covered.

I consider pleurisy to be a subject of great importance, and one which is too much overlooked in that our knowledge is improperly influenced by the results of auscultation. I have here a dissection of a child, illustrated by wax models, appropriately colored. You will see in this first model that there are numerous pleuro-plastic adhesions, particularly to the pericardium. In the next model the lung is thrown up, showing adhesions to the diaphragm, and demonstrating the influence of the pleura upon the pericardium and the heart. Physicians must have a good knowledge of the pulmonary sounds in the normal chest before auscultation can be of much value. In order to obtain this knowledge one must have an ear which can appreciate these sounds. Many sounds impinge upon the ear which are not recognized. In auscultation many sounds are not recognized because of insufficient training of the ear in the recognition of the normal sounds. If a large surface of the pleura is affected, respiration is very seriously disturbed, but the physician should be able to recognize these conditions of the pleura long before such an advanced stage is reached. There is a great variety of abnormal sounds heard in the chest from the time that inflammation sets in

until the pulmonary pleura becomes thickened, and there is an adhesion between it and the costal pleura. These adhesions are often very firm, and they allow of all degrees of motion. I wish to emphasize the fact, that after pleurisy there may be extensive adhesions, not only of the pleura to the diaphragm, but also to the pericardium.

Regarding the treatment of pleurisy, I think we are too apt to discontinue our visits as soon as we have relieved the pain. The effusion in the pleural cavity should be removed by us. I am afraid we ignore the book of physiology too much respecting the influence of respiration and alimentation on the vitality.

Nephrectomy and Resection of Ureter for Tuberculosis.

BY E. J. ILL, M. D., NEWARK, N. J.

Dr. Ill described this interesting case, and presented a photograph. The specimen had been taken from a young woman of twenty-eight years, four weeks ago. She had been sent to him with bladder symptoms, and her attending physician stated that he had found tubercle bacilli in the urine. Examination showed a thickened ureter on the left side, and that the right kidney was healthy. It was inferred that the left kidney had been diseased for a year, and she had complained of pain in the left loin, radiating down to the bladder for about this length of time. Examination of the urine from the other kidney showed it to be healthy. He had then opened the loin, taken out the kidney, and ligated the vessels, but had left the ureter intact. He had next dissected down as far as he could reach in the loin and had made a second incision in the linea semilunaris just above the pubes. Through this incision he had pushed the peritoneum back until the iliac vessels had been reached, and had then continued the dissection of the ureter down to the internal iliac. He had next tied the uterine artery anterior to his finger, and the internal iliac artery posteriorly, and then opened posteriorly through the vagina along the line of the ureter, and dissected out the latter. The ureter was finally cut in two after ligation, and drawn down through the vagina, where it was ligated and cut off below. The wounds had healed nicely, and the woman had made an excellent recovery.

REPORT ON "PROGRESS OF DISEASES OF NOSE AND THROAT," BY T. W. CORWIN, M.D., NEWARK, N. J.

The progress of rhinology and larynology during the year just passed has been marked by steady advancement all along the line, and by studious development of our knowledge along paths previously pursued. There have not as frequently in the past few years been so many startling discoveries of radical facts and conditions. As these should pertain rather to the earlier development of a science, we may perhaps feel that our knowledge of this branch of medicine is beginning to attain to the character of adult life. Its underlying principles are certainly becoming more definitely organized and its rules of procedure more fixed and precise. Thus, a survey of the literature shows that most of the important principles and methods in general acceptance heretofore, have become further intrenched in our estimation and less liable to hostile criticism, and that discussion has been mostly directed to the elaboration of detail. The literature is actually profuse, both as regards books and magazines, and the transactions of medical societies give further proof that rhinology and largynology are topics of absorbing interest and of recognized importance. Their relations to the general health and comfort are so intimate and immediate, as to exact the interested attention of the profession.

The study of the accessory sinuses of the nose has been pushed notably and is bringing to light the conditions of many cases hitherto considered obscure. Bacteriological investigation has shown that these spaces are apt to be infected during inflammatory or infectious conditions of the nose, and, also, in cases of general systemic infection. Traumatic conditions, often those even of minor degree, sometimes furnish conditions which lead to infection.

Weischelbaum and Frankel have investigated the relation of sinus disease to general systemic infection, and found them frequently associated. In one hundred and forty-six autopsies by Frankel, sixty-three showed sinus trouble. In children it is frequent from the prevalence of diphtheria, scarlet fever and measles. In adults it is associated with pneumonia, influenza, erysipelas, cerebo-spinal meningitis, peritonitis, typhoid fever, variola, etc. Tubercular deposit is not frequent in these localities, but syphilitic processes are common and cause rapidly destructive action, as we are all too well aware.

We can no longer continue satisfied with the simple removal of

purulent discharges and recurrent polypi. Our art compels us to trace them to their beginnings, whether the search requires that we break down the ethmoid cells or invade the body of the sphenoid bone; whether it demands exploration of the frontal sinuses or perforation of the maxillary autrum. Even though most of these cavities are but slightly separated from the brain cavity, their limits are constantly invaded in the relentless pursuit of the enemy; for we know that the very existence of suppurative processes in the sinuses is often menacing to life itself, as well as a cause of much disability and discomfort or distress. Thus, sinus troubles are being cured which were ready to extend to the meninges of the brain, with almost certain death. Others are eradicated which have long been the cause of that condition of difficult brain action known as aprosexia, happily described by Bosworth as the feeling of "a blanket upon the brain." Other cases are found to be maintaining nasal catarrh, chronic bronchitis and asthma, or provoking dyspepsia and gastritis.

I may well call your attention at this point to a most valuable paper upon the anatomy and surgery of the frontal sinus and anterior ethmoid cells, by Dr. Howard A. Lathrop, of Boston. It is superbly illustrated by no less than eighty-nine life-sized photographic plates of fine execution. This work obtained for its author the Warren Triennial Prize. It is published in the *Annals of Surgery* for November, December, January and February.

Deflections of the nasal septum have received much attention of late as regards measures for its correction. These deformities frequently determine morbid conditions of the respiratory tract below them, in addition to many disturbances in the nose. Operations for their correction are to be considered conservative ones, in the sense that the restoration of the septum relieves obstruction without sacrificing any tissue, while the reduction of turbinates by cautery or snare or otherwise, to make room for breathing, causes often a serious loss of mucous membrane.

While formerly any disturbance of its integrity was studiously avoided lest perforation should follow, the septum is now known to easily tolerate all necessary measures for its repair. Several creditable methods have been put before us for straightening it, but the justly esteemed operation devised by Dr. Morris J. Asch, of New York City, is being received with most favor. It has the great merit of being applicable to the most formidable varieties of this deformity.

About its only disadvantage is that general anæsthesia is required for its proper performance. This deters many from undergoing it.

Nasal diphtheria, or so-called membranous rhinitis, is an affection of quite common occurrence, at least in the writer's experience. It, therefore, demands a passing note. The disease is very liable to be overlooked because it often causes no pain and no notable constitutional disturbance, and is not usually accompanied by lesions in parts, where, as in the pharynx, the mobility and constant movement of the tissues develop pain. The patient, whether child or adult, complains of stoppage of one nostril and discharge of thin fluid, with perhaps some soreness. This all may easily pass for a common cold. A glance at the mucous surface, however, usually with the aid of a nasal speculum, shows a patch often quite small, which quite nearly resembles a piece of wet blotting paper, and this is found to be adherent. In all cases where this appearance has been observed by the writer, a culture has been made and has on each occasion developed a growth of the Klebs-Koeffler bacillus. The characters of this deposit are so strikingly distinctive that once observed it will be promptly recognized in subsequent cases. These cases emphasize the need of the routine use of a nasal speculum in ordinary practice.

Hypertrophies of the lymphoid, or so-called adenoid tissues of the naso-pharynx, properly continues to be a topic of the highest interest. Their potency for harm is so great, their occurrence is so frequent, and the relief which follows their removal is so immediate and apparent, as well as lasting, that their consideration is a proper occasion for enthusiasm. This is getting to be more and more realized by the profession generally. All honor, then, to the memory of Dr. Wilhelm Meyer, of Copenhagen, who, in 1880, demonstrated before the International Medical Congress the nature, frequency and evils of these growths and a successful method for their ablation. Many thousands have benefited by his labors! Countless thousands more will hold his work blessed! So fully has this been recognized, that during this present year a monument has been erected to his memory; a most unusual tribute to a devotee of medicine.

Many plans of attack upon these offending masses have been devised. Cutting instruments have been found to give most satisfaction, as the necessity for thoroughness of removal is constantly being emphasized (except in dealing with infants, upon whom a later and complete operation will be required). Successful extirpation re-

quires the use of forceps, curette and fingers, and a patient, painstaking manipulation under full anæsthesia. Rapid methods under partial anæsthesia will be found to yield unsatisfactory results. A small percentage of recurrences will occur under any method. Forceps almost without number have been devised. There are several of good design. The writer has found the Brandagee pattern very serviceable.

Hypertrophied tonsils are usually efficiently excised by the old methods. In the case of adults, however, where hemorrhage is liable to be severe, the use of a heavy snare, such as has been specially devised by Dr. Bosworth, is recommended. It is apt to give pain, unless cocaine be injected into the body of the tonsil with a needle, but with this precaution it is well borne.

We must not leave this subject without acknowledgement of the value of intubation of the larynx, and our indebtedness to the illustrious and lamented Dr. O'Dwyer. We know it to be the means of saving many lives and greatly relieving the suffering of many others. The profession honors itself by honoring the memory of such men; and it is with pleasure that I learn that the American Medical Association has undertaken to obtain funds for a memorial to the worth of Dr. O'Dwyer.

A few new remedies have shown themselves valuable during the past year. *Nosophen* is a most valuable preparation of iodine for use in the upper air passage. It is without odor and greatly promotes aseptic healing.

Orthoform is fast making a place for itself as a local anæsthetic, and is available at times in cases of tubercular laryngitis. It is best exhibited in egg emulsions, and may be combined with menthol.

Heroin is a wonderfully efficient sedative to the respiratory tract, and has comparatively little toxic property in comparison with codeia and morphine, although it also is a derivative of opium. In doses of from $\frac{1}{12}$ to $\frac{1}{6}$ grain every three to six hours, it yields quite astonishing results in allaying cough. In very irritable subjects some nausea is excited. In one case of the speaker's, its use had to be omitted for this reason, but such experience is decidedly unusual.

Attention may be called to the use of oil as applied on cotton plugs to the nose for relief of epistaxis. This application is said to be exceptionally efficient and to succeed when other applications fail. It appears to be a revival of an old practice.

In extract of supra-renal gland, we have a most valuable therapeutic resource; although its virtues were first observed in eye practice, it is equally serviceable on other membranes. When a diluted solution is applied to the nasal membrane, the surface rapidly becomes pale and even white, and the tissue becomes decidedly shrunken. This condition may be maintained for a considerable time. The sensibility is not greatly affected. When this condition has been induced and the sensibility also abolished by the application of cocaine solution, quite extensive operations may be performed upon the nasal tissues with almost no loss of blood. Surgical procedure is thus greatly facilitated and hastened, while the patient is spared from the shock so often incident to the appearance of blood. The extract is also of use in many conditions of the vascular engorgement, acute and chronic. The system does not seem to become habituated to its action, for it continues of equal virtue during constant use for months even.

REPORT OF COMMITTEE ON POLLUTION OF STREAMS.

The Committee on Pollution of Streams was appointed last year, after the passage of a resolution by the Society recommending "the enactment of a law which will effectually prevent the defilement of the water sheds and the streams and lakes which are now in use or which may hereafter become necessary for use for supplying water for potable purposes." No definite duty was assigned to this committee, and they therefore can only report to the Society the legislation that has been had on the subject.

Several laws had been enacted by the legislature at various times with the professed object of protecting water used by municipalities for domestic purposes, but they had been partial in their scope and difficult of enforcement. In 1897 a more important law was passed, but limited in its operation to the Passaic River above the Great Falls, which river had become the supply for a number of large and growing municipalities. The value of this law lay in the provision for its enforcement, in that it gave power to any local board of health along the river to prosecute offenders and apply to the Court of Chancery for injunctions against violators of its provisions. The last legislature passed two laws for the protection of streams—Chapter 41, "An Act

to secure the purity of the public water supplies in this State," and Chapter 210, "An Act to prevent the pollution of the waters of this State by the establishment of a State Sewerage Commission."

The first law makes ample provision that no sewerage, refuse, excremental or other polluting matter shall be placed or allowed to discharge into the waters or near the banks of any river, stream or pond above the point from which any municipality may obtain its supply of water for domestic use, and provides proper penalties for all offences against the provisions of the act, and gives power to the State Board of Health and local boards to enforce these penalties. This prohibition, however, does not interfere with municipalities which now have a regularly established sewerage system. The law also directs that the State Board of Health shall have the general supervision of all rivers and other waters which are or may be the source of public water supply, have authority to examine the same, and may address their inquiries to local boards of health and municipal authorities for information, and they may stop pollution by injunction proceedings in the Court of Chancery.

The second law establishes a State Sewerage Commission of five members, who shall have full power to inspect and investigate all municipal sewerage systems now in operation and to advise in reference thereto, and especially provides that hereafter no municipality shall discharge its sewerage into any waters of the State, except on plans which have been approved.

The chief defect in both these laws lies in the omission to provide against the pollution of streams by the discharge of sewerage from municipalities now using them for this purpose, or even to insure the gradual discontinuance of this form of pollution. They are, however, far in advance of any laws before enacted, and will undoubtedly accomplish much benefit to the State. The first law refers solely to water now used or likely to be used for domestic purposes. The latter affords protection to all the rivers and waters of the State against future gross pollution.

The local board of health of the communities using the water, and also the State Board, have authority to prosecute violations and enforce penalties or enjoin by Chancery proceedings when necessary. The State Board of Health and the State Sewerage Commission have each in its respective sphere, full power of inspection and examination of all forms of water pollution, and by public reports and advice or

direct authority will have great restraining influence. The State Board of Health has been given supervision of all rivers and waters used as public water supplies, and the State Sewerage Board has not only similar power for inspection, investigation of complaints, advice as to their remedy, but also direct authority to prevent future defilement of all water courses by gross sewerage pollution.

E. J. MARSH,
HENRY MITCHELL,
E. L. B. GODFREY.

REPORT ON "PROGRESS IN BACTERIOLOGY," BY EDWIN C. BALDWIN, M.D., PRINCETON, N. J.

(Director of the Laboratory of Hygiene, Princeton, N. J.)

As there have been no epoch-making discoveries in bacteriology during the past year, I shall not confine my remarks to what has been brought to light during that time, but rather shall attempt to show what bacteriology of today is in its relation to the sphere of medicine, and incidentally mention a few of the results of more recent investigation.

While bacteriology is still in its infancy, and thousands of bacteriologists are devoting their best energies to the development of the science in its various phases and along different lines, we are all of us aware that the benefits which it already affords to the practitioner and to the public are manifold and far-reaching. While broad in their scope, they are definite and tangible. Some of the most patent ways in which it has contributed to the advancement of the science of medicine are (1) in affording a quick and certain diagnosis, (2) in affording valuable remedies for the prevention and cure of certain diseases, and (3) in giving us more definite knowledge as to the nature of disease and the prevention of its spread.

So important and valuable has the work of diagnosis become, that many municipal, state, and other public and private laboratories have been established for its execution. Thus, in the laboratory, by the examination of cultures, excreta, diseased tissues and their products, we are able to make a diagnosis which is practically certain in a large number of diseases. Of these I may mention cholera, plague, yellow

fever, influenza, septicæmia, pneumonia, meningitis, malaria, gonorrhœa, anthrax, glanders, hydrophobia, typhoid fever, diphtheria and tuberculosis. In most of these, the diagnosis is equally certain and can rarely fail when properly performed, though much depends upon the stage of the disease at which the test is made. Some of them, either because of necessary delay or because we seldom or never have to deal with the disease for which they are performed, are of little practical value to us. Those diseases in which the laboratory diagnosis is perhaps of most value to us are tuberculosis, diphtheria, typhoid fever, gonorrhœa, malaria and hydrophobia.

In tuberculosis, for instance, we are able, on account of the peculiar staining qualities of the bacilli, and their power to resist decolorization, to make a diagnosis from the sputum or pathologic tissue of tuberculous patients. It is possible to make the diagnosis in cattle by another method quite as simple, *i. e.*, by the use of tuberculin, which will be mentioned later in its relation to the prevention of disease. In diphtheria, by the examination of cultures from the diphtherial exudate, it is possible to make a nearly certain diagnosis, on account of the peculiarities of morphology as brought out by straining. In hydrophobia, though we have not as yet discovered the germ which we have good reason to believe is the cause of the disease, we are able in the laboratory to make a positive diagnosis. In gonorrhœa we are not only able to make the diagnosis from the examination of the usual discharge, but it has recently been shown by Drs. Thayer and Lozier (*Jour. Exp. Med.*, Jan. '99) and by others, that the gonococci may be present in the blood and tissues of the patients during the various complications and sequellæ of gonorrhœal urethritis. The results of their work are summed up as follows:

1. Acute gonorrhœal urethritis may be the starting point for a grave general septicæmia. 2. It may be a mixed or secondary infection. 3. Endocarditis is sometimes a complication of gonorrhœa. 4. Endocarditis may be transient or rapidly fatal. 5, Endocarditis following gonorrhœa is due usually to gonococci alone, but may be secondary or mixed. 6. Pericarditis may occur but is less frequent. 7. Grave myrocardial changes are common in severe cases. 8. In some cases the diagnosis of gonorrhœal septicæmia may be made from blood, culturally, during life.

But perhaps the diagnostic test which is most strikingly useful and reliable, is one which is much newer than any of these, and which is

performed in quite a different manner, *i. e.*, not by finding the organisms in the excreta, etc., but having the organisms in pure culture, by the effect produced upon them when brought in contact with the blood or serum of patients afflicted with the disease of which they are the cause. I refer to the serum reaction of Pfeiffer and Grüber. This is due to a certain agglutinating property in the blood and serum of patients affected with many of the bacterial diseases, and is specific for the bacteria which cause a given disease. It is especially useful to us in the diagnosis of typhoid fever.

While every one is more or less familiar with the test, there may be some here who are not familiar with the method and the reliability of the test. I will, therefore, venture to consume a little of your time in briefly going over the method as performed in most laboratories. Blood is obtained by pricking the finger or the lobe of the ear of the suspect, is placed in neat drops on a glass slide or piece of hard finished paper and allowed to dry; or, preferably, the serum from a small blister is drawn in a capilliary tube which is then sealed and sent to the laboratory. Some of this blood or serum is there mixed with water; a loopful of fresh bouillon culture is then added and mixed (the exact dilution being noted), and the preparation is examined under the microscope. If the case be one of typhoid fever, the bacilli will usually be seen to lose their power of motion, and will collect in clumps or small rafts. The test may also be performed by the use of dead bacilli, as has been shown by Vande Valde, Widal and others. I have used the dead cultures in hundreds of cases and have found them quite as reliable as the living. The reaction when present is absolutely diagnostic when occurring in high dilutions. When not present, the converse cannot be said, for the reaction is not always present, especially early in the disease, and may not occur until convalescence. It usually occurs by the end of the first week.

For obvious reasons, none of the ordinary tests as performed in routine diagnostic work are reliable when taken apart from clinical data and other circumstances. There are several bacilli which closely resemble tubercle bacilli in their staining properties, such as those found in timothy hay, in smegma, in leprosy and in the early lesions of syphilis. A bacillus has recently been discovered which not only has these characteristics, but which also produces similar lesions in domestic animals. The bacilli can, however, be differentiated culturally, and the diseases can be differentiated by the use of tuberculin.

There are several bacilli closely resembling the bacillus af diphtheria, but which do not usually occur in the throat. *Recently, however, one has been discovered which does occasionally occur in this location, but which causes general septicæmia, and none of the local diphtheria lesions in animals.

In passing, we may mention a few of the results of recent investigation. J. W. Eyre (*Jour. of Path. and Bact.*, May, '99) has discovered the cause of a disease which he terms diplo-bacillary conjunctivitis in the bacillus lacunatus, so named from its peculiar method of growth. Koplik has discovered the bacillus causing whooping-cough (*Centralblat f. Bact.*, Apr. '99).

Recent research has shown that the bacillus of tuberculosis is probably not a bacillus but a minute fungus (Chas. F. Craig, *J. Exp. Med.* '98). Nocard, Roux and Metchnikoff were among the first to call attention to the branched forms, and Babes, Levadlti, Friedrich and others have succeeded in producing intracraneally ray-like colonies resembling actinomycosis. † The cause of cancer, according to a number of investigators, has been shown to be a blastomyces. Many diseases which are at present only named by terms referring to the part of the body affected, will, perhaps, in the future, be more clearly defined and diagnosed bacteriologically. In the modification of media and along other lines, there is here a wide field for investigation.

We will next turn our attention to bacteriology in its relation to therapeutics. Following the discoveries of Behring and Koch, much more was hoped for serum therapy in the treatment of all manner of diseases than is hoped at the present day. For most of the sera which have thus far been tried have proved of little or no benefit in the cure, and many of them of only slight benefit in the prevention of disease. This is largely due, no doubt, to our lack of knowledge as to the nature of toxins, antitoxins, immunization, etc., and partly to the fact that certain diseases, from their very nature, are not amenable to such treatment.

Therapeutic sera act in one of two ways: They either prevent the growth and activities of the bacteria, eliminating them from the system or holding them in abeyance; or they counteract the effects

* *Med. News*, April 29, 1899. Miss L. D. Davis.

† For an excellent review of this work, see *London Lancet*, April 4, 1899.

of the poisons which the bacteria produce, by fortifying the tissues against these poisons, or by so combining with them as to render their action neutral. In no case can they repair the damage already done, and in many they are of little benefit once the disease is under way. The exact nature of none of these substances, nor of their action, is as yet understood, nor perhaps ever will be, though recent research is throwing much light on the subject.

But against a number of diseases we are able to wage successful warfare, be it by fortification or by open combat. Against diphtheria we have an antitoxin so potent that $\frac{1}{100}$ of a c. c. will immunize a guinea-pig against 100 fatal doses of diphtheria toxin. Against tetanus we are able to obtain a serum of such strength that 1 c. c. will protect against 1,000,000 times the fatal dose. Of the efficiency of diphtheria antitoxin in animals, there can be no more question than of the fact that a stone, when severed from its support, will fall to the ground. As to its value in the treatment of diphtheria as it occurs in man, practitioners of the civilized world, with few exceptions, are agreed that it is equally certain in its effects when applied before the disease has made its ravages upon the system, and that even late in the disease it is of some benefit. The few who arbitrarily deny that it has any value, would seem to be almost as lacking in the ability to reason as the learned member of the R. C. S. E. who has recently, in an elaborate article, as arbitrarily denied that bacteria are a causative agency in disease, but rather the result of disease.

Tetanus antitoxin, in its action, is even more potent than is that of diphtheria. In immunization and early in the disease before violent symptoms appear, it is certain and reliable. But in the treatment of the disease as usually applied, it has much less value, for two reasons: first, because when used late in the disease it cannot repair the damage already done by the toxin of tetanus, and secondly, because the disease is not usually discovered until the symptoms appear, and the toxin has already poisoned the tissues.

A method of administration, however, has recently been discovered, by which, even after violent symptoms have appeared, we may still protect the patient from its ravages and save his life. That is by the intra-cerebral injection of antitoxin. Wasserman was the first to show that when tetanus toxin is mixed with an emulsion of nervous tissue of a susceptible animal, and this mixture injected, no symptoms appear, and that, therefore, tetanus toxin has a special affinity for

nerve tissues and is a direct nerve poison. Semple has shown that though an animal is injected with a protective dose of antitoxin, and later, subdurally with the toxin, it will still develop cerebral tetanus. Following these discoveries, Roux and Borrel (*An. de 'l Institut Pasteur*, Apr. '98) brought out the fact that the disease may be treated successfully even after violent symptoms have appeared, by injecting the antitoxin intra-cerebrally. Therefore, in practice, it is recommended to inject subcutaneously if the disease is suspected, or has only just appeared; if late, and violent symptoms have appeared, to inject intra-cerebrally. The first case actually treated in this way was in April, 1898, by Chaufford and Quenin (*La Presse Medicale*, June, '98). Since then many cases have been treated with good results.

For plague we have an antitoxin which has been shown to be antitoxic, bactericidal and curative. Opinions differ as to the therapeutic value of tuberculin. The anti-streptococcus and anti-pneumococcus sera are uncertain and unreliable in their action. The antitoxin of typhoid fever has been shown by Wright and Kemple to have some value in immunization. The Pasteur treatment of hydrophobia has proved to be thoroughly reliable in the hands of many investigators. Some experiments by Dr. Cabot (*Med. News*, Mar. 18, '99) on cauterization in hydrophobia are worthy of mention. He finds that cauterization with fuming nitric acid, within twenty-four hours after infection will save ninety-one per cent. of cases.

We have seen a few ways in which bacteriology has contributed to medicine in the diagnosis and treatment of disease. In its relation to personal and public hygiene the results are still more notable. Time will not permit me to go into the subject in detail, and I shall have to be content with simply hinting at a few of the most striking illustrations.

By affording us a more definite knowledge as to the cause of diseases, the manner in which they spread, the conditions which are favorable and unfavorable for the growth of bacteria, both inside and outside the body, and the limitations of their resistance to deliterious agents, bacteriology shows us how we may and may not prevent the propagation of disease. I will mention briefly a few of the results of recent investigation as bearing upon this subject.

Theobald Smith (*J. Exp. Med.*, 1899) has shown by some careful experiments that the death point for tubercle bacilli in suspension, is

60° C. in fifteen to 20 minutes, and that the scum of milk, after sterilization as ordinarily performed, may contain living, virulent tubercle bacilli. Careful comparison of bovine and human tubercle bacilli has shown the bovine variety to be more virulent to animals (*J. Exp. Med.*, 1898, p. 451). In tuberculin we have a reliable diagnostic test for tuberculosis in cattle. We can thus, by destroying all tuberculous cattle, remove all danger of infection from tuberculous meat and milk.

Mitchell and Crouch (*J. Path. and Bact.*, May, 1899) have shown that our ideas as to the value of sunlight as a disinfectant need modification, for they have found that tubercle bacilli on soil may still live after an exposure to direct sunlight for thirty-five hours, and that dried sputum is therefore dangerous, even after long exposure. When, by the education of the masses, we can secure proper cleanliness in their habits, the principal sources of danger will be removed.

In regard to typhoid fever, it has been shown by Hiss (*J. Exp. Med.*, 1897), by Richardson (*J. Exp. Med.*, 1898) and by others, that the fæces and urine of typhoid patients contain typhoid bacilli until far into convalescence, and may therefore be a fruitful source of danger unless the excreta are carefully disinfected.

That flies, mosquitoes and other insects are a prominent agency in the spread of disease has been long surmised, but by recent investigation this has been proven beyond a doubt. Major Roland Ross (*An. de l'Institut Pasteur*, Feb., 1899.) has given us the results of a very careful series of experiments on the rôle of mosquitoes in malaria. He has found the organisms in the stomach and in a gland—the venimo-salivary—which is connected with one of the styles with which the mosquito pierces the skin. The cycle he shows to be complete. The hæmatozoa enter the stomach of the mosquito, grow in its walls and give rise to germinal filaments. These penetrate the venimo-salivary gland and thence are disseminated through the capillaries of the sound subject. These experiments were performed on birds, but probably hold true for man. Nuttall has found the bacillus of the plague in the stomach of flies. In some of our camps during the late war it was shown that flies were an important factor in the spread of typhoid fever. These are sufficient hints to show us the importance of protecting all infectious material from flies.

In the matter of disinfectants, as a result of many careful experiments, our ideas have undergone considerable modification. It is no longer considered rational, for the purpose of disinfecting a room, to

set out dishes containing a disinfectant or to hang up clothes saturated therewith. To be efficacious, the disinfectant must be in direct contact with the organisms for a sufficient length of time and under suitable conditions to destroy them. The best disinfectant known at present, for rooms, clothing, bedding, etc., is formaldehyd. But even this has its limitations, which are well brought out in an article by Dr. Park in the *Medical News* of May 13, 1899.

Many of the great problems of bacteriology are still unsolved. Most bacteriologists are simply following in the lines of a few leaders. As in other fields, only now and then does a great genius arise to bring forth some new and important discovery. Perhaps the time will come when, by the use of suitable media and of suitable methods, we shall be able to find the cause of all diseases and a specific cure for most of them.

Report of the Standing Committee.

The Standing Committee congratulates the Medical Society of New Jersey upon another twelfth-month of prosperity and increased activity among the societies of which it is composed. No wide-spread disease of a serious character, no devasting epidemics have been within our borders. Fewer, than for many years have been removed from our number by death.

The Standing Committee, as elected at the last meeting of the Society, organized by appointing H. W. Elmer chairman, and assigning to Dr. Henry Mitchell the preparation of the paper of "Progress of State Medicine"; to Dr. Iszard, that of "Medicine and Therapeutics"; to Dr. Benjamin, that of "Surgery"; to Dr. Hedges, that of "Diseases of the Eye and Ear"; to Dr. Pierson, that of "Diseases of the Nose and Throat," and to Dr. Elmer, that of "Bacteriology." As allowed by your By-Laws, many of these papers have been prepared by others than your Committee.

The Chairman thanks the reporters who have so well and timely performed their duties, and while the time-honored complaint, "that few responses have been made to the circular letters sent out," is no less frequent, yet, in the main, the reports have been satisfactory. We would again urge upon the reporters the advisability of keeping themselves well informed, throughout the entire year, of the proceed-

ings of their county societies, that they may not be so dependent upon outside assistance in making up their annual report.

It is evident from the information furnished, that many of the societies are increasing numerically; that the members are correspondingly interested in the work, and the number, character and practicability of the papers presented indicate a wholesome spirit of professional advancement. Time will not permit an allusion to each society, but mention will be made of the more noticeable changes.

Bergen county sends the first report for three years, but states that the absence of the report was not due to any lack of interest in the society; that it was never in a more prosperous condition; that the papers read are numerous, practical and interesting.

Burlington county has made a new departure in the manner of conducting her meetings. The society is divided into three sections—Medicine, Surgery and Obstetrics (including Gynecology) and Pediatrics. A chairman is appointed for each, and one meeting a year is devoted entirely to each one of these sections. So far, the plan has worked admirably, and if successful, the by-laws will be altered accordingly.

Camden county's extended report shows the society active and fully abreast of the times. Three of its meetings were devoted to the presentation and discussion of scientific papers exclusively, while at the annual meeting a banquet was served, after which addresses were made and toasts responded to.

Cumberland county congratulates herself upon her increased growth and interest in her affairs by her members, deriving much benefit from the frequent interchange of delegates with adjoining counties. On December 8, 1898, the eightieth anniversary was celebrated in Bridgeton, with marked success. At the opening session, held in the afternoon, an address of welcome was extended by Dr. Newell, of Millville, and responded to by Dr. William Easterly Ashton, of Philadelphia. The history of the society was read by Dr. F. M. Bateman, of Cedarville, after which interesting and highly instructive papers were read by Drs. H. A. Hare, John B. Deaver and David Riesman, of Philadelphia. The evening was occupied by a social function, at which were a number of distinguished guests. At the banquet, toasts were responded to by Drs. H. C. Smith, of Millville, Phillips, of Deerfield, Godfrey, of Camden, and H. C. Wood, J. Chalmers DaCosta and Hare, of Philadelphia. An account of this celebration will appear in the Transactions.

Gloucester county reports a continued and growing interest in the society. On the fifteenth of September last, the eightieth anniversary of its organization was celebrated at Wenonah. In this, many distinguished invited guests from a distance participated. The afternoon session opened with prayer by Rev. Dr. Eckersley, and was followed by an address of welcome by the Mayor of Wenonah, which was responded to by Dr. Mordecai Price, of Philadelphia. Dr. James Tyson, of Philadelphia, then read a very instructive paper on "The General Practitioner." Dr. George C. Laws, the president of the society, addressed the audience on the subject of "Glonoinism," and the historical sketch of the society was read by Dr. Luther M. Halsey. At the banquet in the evening, Dr. Reading presiding, toasts were called and responded to by a number of the guests present.

Mercer county reports excellent and instructive meetings, and mentions a number of valuable papers which have been presented—that of Dr. John Bruyere, on "Progress, Problems and Prospects in Medicine," being deemed especially worthy of note. The paper of Dr. H. C. Norton, on "The Need of a Medical Library in Trenton," has been the means of arousing an interest in that project, which, it is hoped, will place such a library on a permanent basis.

Middlesex county is in good condition, and as an earnest of its efforts in public spiritedness, joined interest with The Microscopical (State) Society and a chapter of the Phi Beta Kappa, and secured a lecturer on liquid air.

Warren county has touched the highest water mark, in numbers, since its organization in 1826.

Of the contagious and exantematous diseases, scarlatina and rubeola are mentioned as prevailing in several counties, notably in Bergen, where Dr. Purcell notes a epidemic in Closter, and in Sussex, while of rubeola and pertussis, less mention is made. Epidemic influenza, as of old, has been present in all sections, followed in some instances by fatal pneumonia, but with no new practical developments, except that, if allowed, "Dame Nature" will take care of herself. Diphtheria has prevailed extensively, only to prove more conclusively, the virtues of antitoxin. Dr. McGalliard gives interesting statistics prepared by himself, of cases occurring in Trenton. Very general mention is made of typhoid fever—eighteen cases occurring in nine families, as mentioned by Dr. Neer, of Bergen county, from infected

milk, and five other cases from impure drinking water, between July, 1898, and January, 1899. Dr. Parsons calls attention to a sequela in one case, of polyuria; two hundred and forty fluid ounces of urine being passed in twenty-four hours. We regret that the valuable report of Drs. Romain and Closson, on the epidemic of typhoid fever in Lambertville, was furnished too late for publication in the Transactions of 1898, but it may be found in the *Philadelphia Medical Journal* of November 12, 1898.

Of epidemic cerebro-spinal meningitis, Dr. Lansing, of Tenafly, Bergen county, reports twenty cases as occurring in his practice, but furnishes no details. Ten cases are reported from Elizabeth.

Numerous interesting cases and medical facts are mentioned. Dr. Mailly, of Bridgeton, reports two cases of infantile scurvy, very insidious in development, as coming under his observation, due to the use of boiled milk with an artificial food. He remarks that "the extraordinary care given to infant feeding, the multiplicity of foods and the boiling of the milk is likely to swing the pendulum away from the primary digestive diseases to those of the secondary diseases of assimulation." Dr. Parcell reports a similar case from a similar cause.

Dr. Struble, of Trenton, reports in interesting detail, eight cases of poisoning from eating the toad-stool—the "Amanita Phalloides." Three cases ended fatally in from forty-six to fifty-four hours, from heart-failure, the remaining five regained health slowly, but suffered from irritable stomach for a number of days. These cases were investigated by the authorities at Washington.

Dr. Stillwell, of Somerset, reports in full, a case, interesting because of its rarity in this section, of ainhum, occurring in a negro, æt. 59, commencing about six months ago in what the patient called "ground itch." Nature is slowly performing an amputation of the small toe.

As bearing on the subject of bovine tuberculosis, Dr. Applegate, of Bridgeton, cites an instance of a farmer in Fairfield township, who, in the past five years, has lost fifteen head of cattle; he has not been able to raise a heifer. Three children of his family, who drank freely of the milk before this fact was brought to his attention, developed symptoms of tuberculosis. One child, after a year's treatment, is slightly improved; two, after nine month's treatment, have the symptoms in a milder form. This does not apparently agree with

the quotation cited by Dr. Meade Bolton at our last meeting, that the bovine tubercle-bacilli and the human tubercle-bacilli were not identical.

Dr. Douglas, of Morristown, reports a case of hydrophobia occurring eleven weeks after the infliction of the wound by the dog; the correctness of the diagnosis is being proved by bacteriological experiment.

Dr. Bailey, of Camden, reports a case of retained placenta of sixteen years' standing. Dr. Casperson, two rather unique cases of the unexpectedly finding a sewing needle in the rectum of one patient, and a pin in that of another, when neither could recall having swallowed such an article. Dr. Mecray calls attention to the treatment of uræmic convulsions by the intravenous use of normal salt solution. He introduces the solution into the median basillic of one arm and opens the vein in the other arm and allows the contaminated blood to flow out. Many other interesting cases may be found in the reports, which will well repay their perusal.

Of sanitary improvements, but little is noticed. Hudson county, within whose boundaries such extensive nuisances have existed for so long a time, and which were only abated last year, reports exceptionally good health, fewer contagious diseases, and a mortality rate decidedly lower. In Trenton, Dr. McGalliard says the water supply gives concern to the thoughtful; it comes from the Delaware. There is in the course of construction, a new and larger reservoir, which, while it gives more opportunity for sedimentation, does not meet the demand as a filtration plant would. A supervised milk supply has also received attention.

In reply to the question under discussion at this meeting, "To what extent is the Code of Ethics of the American Medical Association in operation today?" some of the reporters have given the gist of the replies and some have quoted in full.

The Bergen county reporter closes his report by adding that "all agree that it is observed to a very limited degree, if not entirely ignored." In Burlington county, Drs. Shipp and Marcy, Jr., hold almost the same views, and doubt if fifty per cent. of the practitioners know what the Code of Ethics is, but if the honest practitioner is imbued with the spirit of the Golden Rule, there would be little use for the Code. In Cumberland, Dr. Mailly suggests that the pertinent thought that if we all agree what constitutes a fit associate,

we shall have gone a long way toward the universal acknowledgement of the Code which we all hope for. Others think that those complaining most of the violation of the Code are themselves the greatest transgressors. Dr. Wade, of Millville, thinks the profession has descended too much toward a commercial basis, and bidding for practice is far too common.

Dr. Marcy, Jr., of Riverton, while acknowledging that it is not strictly observed, thinks it a beautiful and lofty ideal; but as physicians are mortal, they are not always unselfish, yet it exercises a restraining influence upon the profession. Drs. Palm, Wingender, Bailly and others, agreeing as to its restraining effect, acknowledge that it is not carefully observed. Dr. Marcy, of Merchantville, thinks it bears the same relation to the profession that the blue-laws do to the State; that from long disuse it has undergone a process of atrophy and is in vogue in an inverse ratio to one's practice. Dr. McAllister, of Camden, remarks that there are some who have a positive antipathy to the Code, generated by teaching or observation; that they are always present at society meetings, constantly finding new pretexts for doing away with it, but he insists, even if not adhered to, its influence is for good. Dr. Stephenson, of Haddonfield, in comparing his experience of the past thirty-five years, thinks the Code is in complete operation; that in the early part of that period, complaints of its violation were frequent, now they are rare; that now even the laity recognize the justice of its tenets, particularly in the matter of consultations with irregulars.

We are not so sure but that Dr. J. S. Baer, of Camden, puts the subject in its true light when he says, "It is still in existence wherever gentlemen exist, and can never be discarded any more than the Ten Commandments." Dr. Barwis, of Trenton, thinks it well observed, but that the Code of Ethics laid down eighteen hundred years ago, "Do unto others as you would that they should do unto you," a sufficient Code for any body of educated men. Dr. Warman, of Trenton, thinks it is not observed, but urges either its rigid enforcement or ignore it entirely.

Of the hospitals of our State, reports have been received from two only. St. Francis, of Trenton, has recently celebrated its twenty-fifth anniversary. During the year 1898, 1120 patients have been treated, exclusive of the dispensary service. The staff has been increased by the appointment of an opthalmologist, and three assist-

ant surgeons. It has one hundred beds and is well equipped with a modern operating room and appliances, and Roentgen-ray apparatus.

Mercer hospital, of Trenton, now established four years, has thirty-five beds, has treated two hundred and fifty-eight cases, and, as a well-appointed hospital, is doing good work. It may here be stated that today, in Bridgeton, a new hospital is being opened by what may be termed a "donation day."

The following members have been removed from our ranks since our last meeting:

Atlantic county—Edward North, Hammonton, February 11, 1899.

Burlington county—Abram Engle Conrow, Moorestown, June 5, 1899.

Camden county—Henry A. M. Smith, Gloucester City, March 29, 1899.

Essex county—Joseph W. Stickler, Orange, May 18, 1899; Lott Southard, Newark, May 4, 1898.

Hunterdon county—Alfred M. Cooper, Point Pleasant, September 15, 1898.

Middlesex county—John Helm, New Brunswick, November 7, 1898.

Monmouth county—Joseph Borden Goodenough, Long Branch, February 1, 1899.

Warren county—William L. Roe, Vienna, February 11, 1899.

Full obituary notices of these will appear in the Transactions.

The Committee on Publication congratulate the Medical Society of New Jersey upon the excellent number published for 1898, and think we may well be proud of our contributors.

One difficulty confronted your Committee in its publication, and that was a question with the author of a paper, whether the Society should furnish the plates with which to illustrate the paper. The Society and the Committee had already decided that it was not in our province to do so, but a New York medical journal stood ready to furnish the illustrations and print the paper, soon after our adjournment, provided the article should become the property of the editor. We appreciate the fact that the offer was declined, and the paper remained the property of the Society, although the plates involved no slight outlay of money. It has occurred to your Chairman, whether the Society might express its willingness to give the Standing Committee the discretion of assisting, in part, at least, the expense of such plates as they might deem *necessary* for the illustration of any

scientific paper presented in the future. On the one hand, might be urged the danger of introducing unnecessary illustrations and the attendant expense, and on the other, ought it not to be the pleasure of this Society to encourage the members in scientific research, and to whom, sometimes, the expenditure of money is of much more import than the expenditure of time in its preparation.

Respectfully submitted,

H. W. ELMER, *Chairman.*

REPORT ON THE "PROGRESS IN SURGERY," BY D. BENJAMIN, M.D., CAMDEN, N. J.

There have been no great discoveries in Surgery since the brilliant achievement of Roentgen; this, however, ranks with that of Harvey, Jenner and Morton. It seems to be one of those great discoveries that nature can only afford to give us once or twice in a century of painstaking investigation.

The progress, therefore, of the past year consists of improvements in method and technique. This has, however, been great and nearly all along the line, so that to mention all would make a paper that could not be read in the time allowed. I shall not claim them to include all improvements, or wedge them all strictly within the year, as many of them that are being proved and confirmed lap over.

A great deal of trouble has been experienced, it seems, among operators from a want of perfectly sterilized cat gut. I may say that Johnson's, or the following method of preparing cat gut, will give good results. Take the best A and E violin strings; soak them twenty-four hours in oil gaultheria (oil juniper will do), then keep them in strong alcohol. They are very satisfactory to use right out of the alcohol, as they are small and stiff like worm gut, and, therefore, easy to handle; or lay them in antiseptic solution if you prefer.

The Hands.—Various attempts have been made to improve upon the past methods of sterilizing the hands. Lauenstein tried formaline in 125 cases and failed in 75 of them to obtain a sterilized surface; but Saunders and Kramer succeeded in 80 per cent. Kelly's permangenate of potash is not always reliable. So far, the Weir method

seems to be the best. It is as follows: "Scrub the hands and forearms in running hot water with a brush and green soap; clean under and around the nails with a soft bit of wood; place in the palm of the hand a little less than a tablespoonful of chlorinated lime and an equal amount of washing soda, add enough sterile water to the mixture to make a cream-like mass and rub this cream over the forearms and hands until granules are no longer to be detected. This rubbing should occupy about five minutes. The paste is then pushed under the nails and around their margins by a piece of orange wood. When the paste is washed off with sterile water the hands are sterile. This mixture removes fat, grease and a part of the epiderm, and evolves nascent chlorin, which is an active germicide, and being a gas, enters into the tissues to a greater degree than a liquid."

Shall we wear gloves to operate? is a question much debated during the past year by many of the best operators. H. O. Kelly, in his clinic at the Johns Hopkins, and all his assistants and nurses, wear their rubber gloves during an operation. He has had much better results since he adopted this method, and would not do without them. I find gloves more useful to keep from getting infected myself. In other words, I use them when I work in cases that are septic. For instance, if you have to go into a uterus after a piece of decaying placenta, or handle any septic material, you lose no time. Take them out of an antiseptic solution and put them on and go ahead. Insist upon all your assistants wearing sterile gloves, especially in a hospital. If you do not know where the other assistants have had their hands, rubber gloves are safe.

In *intestinal surgery* the Murphy button holds its own and no doubt the quickest and safest method of joining the intestines yet discovered, and you can see the button move by means of the X-Ray.

Some years ago, 1895, I began closing all holes in the bowels by one or more sutures No. 12 silk, straight through all the thickness, inverting the edges as the knot was tied, then putting my Lambert suture over it to back it up and give more serous surface. I have done it four times without a failure. It holds and it prevents leaking, and that is all you want.

In appendicitis, the best way, after cutting away all diseased tissue, is to close the stump as above described for closing a hole in the bowels, though all the operators at present either close with simply Lambert sutures, or tie and cut off, closing over the stump with Lam-

bert sutures. This latter method leaves a point for septic infection. The cutting through of the ligature is not a pleasing contemplation.

Surgery of the Stomach. The brilliant surgery of New Jersey has again demonstrated its claim during the past year to rank with any elsewhere, though there is still some tendency to send the work out of the State—unfortunately for the State, as none of the surrounding States reciprocate. The ingenious method devised by Dr. Ill, of Newark, of finding foreign bodies in the œsophagus and stomach by means of a wax-coated bougie (œsophageal), marks a distinct advance in this work, and his perfect demonstration of the ease and safety with which the stomach may be opened and foreign bodies removed, is of inestimable value. Dr. Kelly, of Baltimore, has used such a bougie in the ureter in search of renal calculus, while Dr. Johnson's portable electric magnet is the best invented.

There have been four cases of entire removal of the stomach, three of which are still living, one of them of nearly two years' standing.

Fracture of the lower end of the radius. A satisfactory treatment for this troublesome fracture has been devised, namely: after thorough reduction, a straight splint on the dorsal aspect of the arm extending from about an inch above the head of the radius to an inch below the metacarpo-phylangeal articulations; a heavy pad in the middle of forearm (Palmer surface) and roller bandage. I adopted this treatment while lecturing on fractures and dislocations in the Medico-Chirurgical College, six years ago. Within a year it has been adopted in the surgical department of the Jefferson College, with much satisfaction.

Stone in the bladder. According to Dr. T. G. Happel, is best removed by incision through the anterior vaginal wall. (*Journal of the American Medical Association*, May 6, 1899). This strikes me as being better than the super-pubic operation, though, of course, not applicable to the male.

The X-Ray work has been greatly improved and gives important information as to the condition, location and disease of nearly all the principal internal organs of the body, not to mention bones and foreign bodies. The catherization of the uterus had no sooner been fully developed by Kelly, than Dr. Harris brings out an improved instrument that greatly simplifies the matter.

The late Spanish war has demonstrated the utter inefficiency of the surgical organization of the army of the United States, pointed

out the direction for improvement, and showed the comparatively small amount of injury inflicted by the modern high-power rifles. The operative surgery of the last war is the one thing to be proud of.

The following remark of Dr. W. W. Keen, following the recovery of a patient from whom he had removed a large portion of the brain, "It begins to look as though no one of the organs in the human body is essential to life," has impressed me.

I might extend this review indefinitely, but my limit has already expired.

I will not impose upon your time by appending a page of bibliography, which I have consulted, but feel bound to mention an excellent review of about 300 pages, by W. W. Keen and Dr. J. Chalmers DaCosta, in Gould's "Year-Book of Medicine and Surgery," 1899.

DISCUSSION.

Dr. William Pierson, of Orange: "In speaking of the advantages of the Murphy button, mention was made of the fact that its progress could be watched with an X-Ray apparatus. I would like to know if the author has a portable apparatus with which he can examine his patients."

Dr. Benjamin: "I carry mine around in the carriage sometimes. It can be run by a battery weighing twenty-five or thirty pounds. A ten-inch coil with the battery can be carried around in a buggy."

ABSTRACT OF A PAPER ON "EPILEPSY," BY L. L. HAND, M.D., LEESBURG, N. J.

Epilepsy is defined as a nervous affection, characterized by attacks of unconsciousness, with or without convulsions. It is the oldest disease of which we have any knowledge and there are records of it in the oldest writings. Some of the world's greatest men have been the victims of the malady, viz., Handel, Cæsar and Napoleon among many others, but while epilepsy and alertness of mind may co-exist, yet its tendency is to weaken the mental fabric. The cause of epilepsy is, to say the least, problematical. It is apt to be looked upon as due to a degenerative process in the brain, consequent upon heredity or congenital imperfections.

A large proportion of epilepsy cases begin before puberty. Of 1,450 cases observed by Gowers, 422 began before ten, and 314 before twenty. Osler finds from a study of 428 cases arranged in hemidecades, this result: First to fifth year, 229 cases; fifth to tenth year, 104 cases; tenth to fifteenth year, 95 cases. These studies show its onset in early life, yet we are to watch for its development in adults, but most of the adult cases are due to local lesions. Sex is no particular factor in the relation to causation. Osler's study shows that out of 433 cases 230 were males and 203 females. Figures of Sieveking and Reynolds show the disease rather more prevalent in females than males. Heredity, according to statistics, figures it from nine to forty per cent. of cases; Gowers gives thirty-five per cent. Hysteria is most difficult to differentiate from epilepsy, as it may very closely resemble epilepsy. Gowers distinguishes them as follows:

EPILEPSY.	HYSTERIA.
Apparent cause—none.	Apparent cause—Emotion.
Warning—Any, especially epigastric auræ.	Warning—Palpitation, malaise, choking.
Outset—Always sudden.	Outset—Often gradual.
Scream—At outset.	Scream—During course.
Convulsion—Rigidity followed by jerking.	Convulsion—Rigidity or struggling, throwing of limbs or head, arching of back.
Biting—Tongue.	Biting—Lips, hands or other people and things.
Micturition—Frequent.	Micturition—Never.
Defecation—Occasionally.	Defecation—Never.
Talking—Never.	Talking—Frequent.
Duration—A few minutes.	Duration—More than ten minutes, often much longer.
Restraint necessary—To prevent accident.	Restraint necessary—To control violence.
Termination—Spontaneous.	Termination—Spontaneous or induced.

Epilepsy is differentiated from uræmia by history and absence of evidence of organic kidney change. Petit mal is to be distinguished from syncope, from vertigo of Meniere's disease, from cardiac lesion

and from indigestion. In these cases there is no actual loss of consciousness, which is the case in petit mal. Regarding the progressiveness of the disease, the words of Hippocrates are as true today as ever, that it is unfavorable when the disease is congenital, and when it endures to manhood, and when it occurs in grown persons without previous cause. To sum it up, the cure may be attempted in the young but not in the old. Our prognosis today is guarded, problematical and uncertain, but with the ultimate perfection of the rational colonization plan, we are expecting to fathom present uncertainties and thus be able to hold out a new lease of life to epileptic victims.

Nothing is likely to improve the physical and mental condition of epileptics so much as proper employment and occupation, combined with skillful treatment, and the proper conditions for favorable advances against this insidious foe of humanity are to be found in the epileptic colony or village plan of treatment, where every phase of the epileptic nature is studied and treated carefully, systematically, scientifically and, to the highest degree, successfully. The earliest effort to improve the condition of epileptics was made in France, a colony being established at La Force, near Lynn. In 1869 another colony was started at Bielefeld, Germany, which, from a small beginning, has grown to consist of a farm of 1,350 acres on which live 1,200 patients. In short, this institution is a little world in itself.

The first step on this continent in this direction was taken by the State of Ohio, in 1893. Its superintendent says: "Results have been gratifying far beyond our expectations." New York has her Craig Colony for Epileptics, which opened late in 1895. Dr Spratling reports good work done, with excellent results. Massachusetts opened a similar institution in May, 1898. New Jersey is now at the front to do her duty toward the epileptics, having authorized the establishment of a colony, November, 1898.

DISCUSSION.

Dr. E. W. Hedges, of Plainfield: "One line of treatment, I think, was not mentioned, and yet it is an interesting one. I refer to the examination of the eye and the correction of errors of refraction, on which the epileptic convulsions may possibly be dependent. In this connection I desire to report three cases. The first case was that of a mechanic, twenty-five years of age, whom I had treated for a year

and a half. He had an epilepsy of the graver type, and I tried every possible means. I had sent him to New York specialists, who had treated him by all sorts of medicinal means, as well as by regulation of diet. He finally got so bad that he had fifteen attacks daily. I then sent him to an oculist, who found that the man was suffering from eye-strain. Eye glasses were adjusted; the convulsions ceased, and now, eight years later, he is still well.

"The second case was that of a married woman who had suffered for several years from convulsions while living in the South. She had been heroically treated with drugs, but without benefit. I sewed up a lacerated cervix and did everything else I could think of, but to no purpose. Her eyesight seemed good, but when the oculist had corrected an error of refraction found to exist, the convulsions ceased, and since then she has been entirely well.

"The third case was that of a boy of fourteen, who had had convulsions for seven or eight years. He came to me seven or eight years ago with a history of having had a convulsion about once a month. I could find no cause for the convulsions. The oculist again found eye-strain, and after the adjustment of eye glasses there were no more convulsions. Eighteen months have now elapsed and there has been no return of the seizures.

"I think, therefore, it would be well for us to bear in mind this one phase of the etiology of epilepsy, and send such obstinate cases to the specialist, who is competent to detect and treat eye-strain."

Exhibition and Description of a Portable Electro Magnet for the Removal of Steel from the Interior of the Eyeball, by Walter B. Johnson, M. D., Paterson, N. J.

The magnet here presented is an original device, to be used in connection with any direct incandescent electric light current, for the purpose of removing pieces of steel which have entered the interior of the eyeball. Its description in detail is as follows:

The core of the magnet is made of the finest grade of Swedish iron which is reannealed and is susceptible of the highest possible degree of magnetic saturation. Its length over all is seven and one-

half inches, its length within the shoulders for tips is five and seven-eighths inches, and its diameter eleven-sixteenths of an inch; the weight is eleven ounces. One of the tips or ends is ovoid in form, the other is elongated, slightly over an inch in length and may be introduced into the eyeball if necessary. The two halves of the core telescope each other to insure magnetic union when placed within the magnet spool. The core is separated in this manner to facilitate its removal from the spool for sterilization. The spool is a tube of brass six inches long and three-quarter inches outside diameter, fitted with three fibre washers, one at each end and one in the center. The end washers limit the winding, the centre washer furnishes anchorage for the lamp cord leads.

The magnet spool is wound with two pounds ten ounces of No. 27 single silk-covered magnet wire. One-half of the magnet is first wound, when the spool is reversed in the lathe so as to continue the winding of the other half in such a manner that the magnet windings may be joined in the centre on the bottom layer of wire of each half. This also brings the terminals of the winding of each half of the magnet to the top layer and facilitates their coupling to the lamp cord leads, which are firmly fastened to the centre washer of the spool. The coupling of the two halves of the magnet in simple series being thus completed, the resistance is two hundred and five ohms.

The conduction cord is a ten foot length of ordinary incandescent lamp cord wire, joined to the terminal ends of the magnet winding at the center washer of the spool, and on the opposite end fitted with an ordinary Edison plug, which can be used in connection with the lamp socket of any direct incandescent circuit. The Edison plug, by the application of an adapter, can be changed for use in connection with any Thompson-Houston socket, or by adjusting the Westinghouse attachment plug it may be used in connection with any Westinghouse socket. It is therefore applicable for use at any place in which a 110 or 120 volt current for direct incandescent electric lighting may be found. It is not applicable for use in connection with the alternating current. The complete magnet weighs three pounds and seven ounces, the diameter of the winding is two inches, and of the washer two and one-eighth inches. The wire winding between the washers is covered with thin leather.

The advantages claimed for the magnet over other magnets for similar uses are: Its portability, which permits its use at any place

in which a direct incandescent lighting circuit may be found, and also allows the magnet operation to be performed with the patient in the dorsal or any other desired position, or its application at any desired angle as related to the position of the foreign body in the eyeball. Its strength, which is equal to that of any other magnet, regardless of the relative size– the pulling strength of the magnet in connection with a spring scales is six and one-quarter pounds. Its compactness which, with its comparative lightness in weight, permits exact manipulation. Its adaptability for use, either by external traction or direct introduction within the lips of a wound. The comparative cost, which is about fifteen dollars, bears the ratio of about 1 to 15 to other magnets of equal strength.

The magnets were made by J. H. Bunnell & Co., of 76 Cortlandt street, New York. The various magnets now presented represent the different stages of development. The first one shown was made many years ago, but was ineffective as it would not stand the current. The next shown was the first magnet of the kind to prove at all satisfactory and was made under my supervision at the Edison electric light plant, in the city of Paterson, about a year ago. The other three magnets were made for me by J. H. Bunnell & Co., of New York, the last one shown being the subject of this paper, the other two representing the various stages of development.

There are also presented, as interesting, three pieces of steel removed during the last six weeks. The patients are all doing well and in no case has it been necessary to emucleate the eyeball. These cases are supplementary to other cases previously reported and are reserved for future report, as detailed description is always unsatisfactory until sufficient time has elapsed to permit full completion of reparative process before the final result is announced, either as regarding the preservation of the eyeball or the existing visual conditions.

DISCUSSION.

Dr. Philander A. Harris, of Paterson: "I do not know much about removing steel from the eye, but I believe all that I have heard from Dr. Johnson, and I have watched the action of this really wonderful magnet with a great deal of interest. When he finally exhibited recently his latest production in this line, I was anxious to test the pulling qualities of the magnet. I held my bunch of keys in front of the instrument and pulled quite hard. Shortly afterward I lost my

train and then discovered that my watch had failed me. As it had done that before I did not think much of it until I took it to the watchmaker, and he suggested that I had been near an electric power-house. Repeated efforts have been made to demagnetize the watch, but even yet it does not go right. I am greatly relieved to find that there are no conveniences here allowing Dr. Johnson to demonstrate the action of this magnet."

PAPER ON THE "PROGRESS IN THE DISEASES OF THE EYE AND EAR," BY F. C. ARD, M.D., PLAINFIELD, N. J.

Mr. President and Gentlemen of the Society:

If I may indulge a hope in connection wiih the reception of this paper, it is that you may not judge of the progress in opthalmology and otology by what is submitted. The literature of the past year is so enormous and so much of it shows evidence of real progress, that it is manifestly impossible to present but a small portion for your consideration.

BLEPHARITIS, DUE TO THE DEMODEX FOLLICULORUM.—Rahlmann (*Klin. Monatsbl. f. Augenheilkunde*, Feb., 1899), calls attention to the frequent occurrence of this form of acarus (which inhabits the sebaceous glands of the face without producing disease) in the follicles of the eyelids, from whence spring the cilia. He has no doubt that this creature causes a special form of blepharitis, which he terms blepharitis acarica, in the course of which the cilia fall out and itching is a prominent symptom. In suspected cases, microscopical examination should be quickly made, and if the demodex is found, a thirty-five per cent. ointment of bals. peru should rapidly effect a cure. Some other observers do not regard this parasite as pathogenic.

ON THE TRUE RATIONALE OF THE PROPAGATION OF BLENNORRHŒA NEONATORUM AND OF OTHER FORMS OF CONJUNCTIVITIS.—*Medizin der Gegenwart*, April 1, 1899. DeWecker plausibly explains that the direct lodgment of gonococciis within the conjunctival sac in ophthalmia neonatorum is next to impossible, because the lids of the child are tightly closed during labor. The outside of the

lids, however, are necessarily soiled during that period, and as soon as the eyes are opened the infection of the conjunctival sac would not be difficult. The author shows that the length of the incubation period proves the truth of his assertion, as it amounts to three or four days, and is never less than two days; while in direct transmission within the conjunctival sac, the incubation period is but twenty-four hours. He believes that in all contagious affections of the conjunctiva, the poisonous matter first lodges on the outside of the lids. After exposure during birth, or under other circumstances, one per cent. oxycyanate of mercury lotion should be used as an antiseptic.

THE GONOCOCCUS AS A CAUSE OF DIPHTHEROID CONJUNCTIVITIS.—Fraenkel (*Hyg. Rundschau*, VIII, p. 313) reports a case of apparent diphtheritic conjunctivitis in a child, aged one year, which proved to be due to the gonococcus.

OCCUPATION-DISEASES OF THE EAR.—Kahn (*Die Gewerbe-und Berufskrankheiton des Ohres Jena*, 1898) states that the occupation-diseases of the ear, to date, are, (1) chronic lead and murcurial poisoning; (2) caisson disease; (3) affections of miners and artillerists; (4) boiler-makers' deafness, telephone ear and the schlerotic form of otitis media found in railway employees.

KERATOMALACIA IN XEROSIS OF THE CONJUNCTIVA.—Elschnig (*Wiener Medicinische Wochenschrift*, April 29, 1899) explains this association thus: Hepatic disease leading to cholæmia and jaundice impairs the secreting capacity of the conjunctiva. This, in turn, leads to an enormous increase in the number of xerosis bacilli always present in the conjunctiva, and the latter germs bring about desiccation, cornification and fatty degeneration of the conjunctival epithelia. As a result of the cholæmia and depressed resistance of the tissue, the avascular cornea undergoes necrosis and ulceration. If pathogenic bacteria are present in the conjunctiva they may develop in the wound, with possibility of general infection. If such bacteria are absent, the infection is benign in character.

TREATMENT OF SCHLERITIS WITH SUB-CONJUNCTIVAL INJECTIONS OF CYANIDE OF MERCURY.—Grand Clement (*La clinique Opthalmologique*, Feb. 10, 1899) says that this excellent therapeutic resource has been ignored by the profession. He has used it for eight years with the best results. Before that period he looked upon schleritis as unmanagable. The malady usually yields to three or four injections, and relapses, to one or two more. An ordinary

Pravaz syringe is used and the mercurial is injected in a strength of 1-1500.

SUPPURATIVE IRITIS FROM THE USE OF POTASSIUM IODIDE INWARDLY.—Westhoff (*Centralblatt fur praktische Augenheilkunde*, 1898, p. 245) reports a unique case in which suppurative iritis appeared whenever the patient made use of the remedy, and disappeared when the latter was discontinued. The only collateral symptom of iodism was the presence of a few pustules on the back.

SEPSIS, FOLLOWING A STYE.—Guth (*Prager Medicinische Wochenschrift*, 1898) reports a unique case of staphylococcus infection, in which the stye caused, by continuity, an orbital cellulitis, and this, in turn, extending inward to the brain, gave rise to suppurative meningitis.

ANIMAL EXTRACTS IN OPHTHALMOLOGY.—Lagrange (*Gazhebdom sci. med. de Bordeaux*, Sept. 25, 1898) has been using a solution of vitreous humor, termed by him, "oculin." The ciliary body and vitreous of an ox are mixed in sterilized glycerine, and after maceration a filtrate is prepared for use by the mouth or subcutaneously. The remedy was used in cases of escape of vitreous in cataract operations and in detachment of the retina. Improvement followed in these cases, but might have been spontaneous.

NEW REMEDIES IN EYE AND EAR PRACTICE FOR THE YEAR 1898.—Bloch (*Med. d. Gegenwart*, Dec. 1, 1898) gives the following for the eye: Mydriatics—euphthalmin, scopolamin bromide; Trachoma—nascent iodine, ichthyol; Conjunctivitis, etc.—protargol suprarenal extract has a marked action upon the vascular injection; of the eye; Organotherapy—oculin recommended for the detachment of the retina.

For the ear: Ext. cimicifuga racemosa for tinnitus; hydrogen peroxide and oxygen gas in otitis media.

INSTILLATIONS OF ANTI-DIPHTHERITIC SERUM INTO THE EYE IN DIPHTHERITIC CONJUNCTIVITIS.—Mongour (*Annales d'oculistique*, 1898, 120, p. 53) observed that during an epidemic of diphtheritic conjunctivitis, antitoxin, when given subcutaneously, was successful as regards the general results, but that several children lost their sight. The next series of cases, seven in number, were treated by direct instillation of the remedy into the sac in conjunction with the regular subcutaneous injections. This treatment was successful in every way.

TREATMENT OF LACHRYMAL AFFECTIONS WITH PROTARGOL SOLUBLE BOUGIES.—Antonelli (report of Ophthalmological Society of Paris, *Recueil d'ophthalmologie*, April. 1899, p. 233) states that protargol is giving good satisfaction in the treatment of lachrymal affections, in the form of injections after sounding. It is more diffusible than nitrate of silver and otherwise better adapted. Antonelli has also succeeded in the use of soluble bougies of protargol and gelatine (aa. fifty per cent.), of the diameter of Bowman's lachrymal probes, Nos. 3 and 4. In discussion, the members of the Society recognized the novelty of the procedure. Antonelli has used his method in twenty cases, introducing the (lubricated) bougie, after previously sounding with the metal sound.

MARMOREK'S SERUM SUCCESSFULLY USED IN PSEUDO-MEMBRANEOUS CONJUNCTIVITIS.—In the *Centralblatt fur praktische. Augenheilkunde*, July, 1898, p. 211, is a mention of two cases of diphtheroid conjunctivitis due to staphylo and streptococci in which Marmorek's serum was successfully administered.

RATIONALE OF SYPHILITIC DISEASES OF THE EYE.—Baas (*Graefes' Archive*, June, 1898) has succeeded in demonstrating what has generally been surmised, viz: the essential element in all syphilitic diseases of the eye is obliterative endarteritis.

PROTARGOL IN CONJUNCTIVITIS AND PURULENT OPHTHALMIA.—Galezowski (*Recueil d' ophthalmologie*, April, 1899) sums up the views of the profession to date on the usefulness of protargol. Its popularity rests largely on the fact that its application is comparatively painless, but this argues for its weak caustic effect. It can never replace nitrate of silver in purulent ophthalmia neonatorum. gonorrhœal ophthalmia of adults, granular and catarrhal ophthalmias. Protargol appears to have no power to arrest a purulent inflammation at its debut.

SUPERIORITY OF HOLOCAIN TO COCAINE.—H. Derby (*Arch. of Ophthalmology*, 1899, No. 1), who has written upon holocain before (*Boston Med. Jour.*, June, 1897), has now formed the following opinions as to the drug in comparison with cocaine: It is not a mydriatic and does not increase the tension; it does not paralyze the accommodation. Its anæsthetic power is particularly marked upon the iris. When inflammation is present, holocain acts much better than cocaine. It produces no general effects. It has no action upon the corneal epithelia. It has a marked bactericidal power.

RESULTS OF THE USE OF EUPHTHALMIN AS A MYDRIATIC, TO DATE.—Darier (*La Clinique Ophthalmologique*, April 10, 1899) reviews a number of studies by various writers upon this subject. The most recent inferences are as follows: Dilatation of the pupil occurs neither earlier nor later than with other mydriatics. The accommodation is very little affected and the intracaocular tension is not modified. There is no toxic nor irritant action, local or general. The mydriasis disappears rapidly.

APPLICATION OF THE SIDEROSCOPE.—Asmus (*Wien. Med. Wochenschr.*, No. 14, 1899, p. 650) states that he devised this instrument five years ago, but never brought it before the profession until 1898. At the time of this demonstration, eighty-three of his instruments were in use or had been ordered. The apparatus consists essentially of a magnetic needle 11 cm. long and 2 mm. wide, and so suspended that it undergoes a declination if placed near an eye in in which steel is imbedded. Further devices are used for rendering the declination evident if the needle does not respond to the ordinary gross test. He gives a number of cases which illustrate the practical quality of the apparatus.

ON AN ARTIFICIAL SUBSTITUTE FOR CORNEA.—Salzer (*Ueber den Kuntslichen Horuhautersatz, Wiesbaden*, 1898) having long observed the tolerance of the eye toward some foreign bodies, conceived a plan of making an artificial cornea in place of keratoplasty, which is always followed by opacities. His plan consists essentially of removing the greater portion of the cornea, and in certain cases, of the iris and lens as well. The artificial cornea is made of rock crystal, set in a platinum ring, and this is allowed to heal up in the wound, which it usually does without reaction. The wound incision is made in the leucomatous periphery of the cornea. Salzer has performed this operation on both animals and man.

A NEW EXPLANATION OF THE ORIGIN OF THE CHOKED DISK.—Deyl (*Wiener Klinische Rundschau*, No. 17, 1899) sums up as follows: Choked disk arises from anatomical compression of the vena centralis retinæ by the external nerve sheath to the extent of slightly checking the blood stream. The source of the pressure is a dropsical accumulation between the two sheaths, due in turn to an increase in the intracranial pressure, and the vein is compressed at the point at which it enters the nerve. Various conditions can bring about this pressure, such as hypophysis tumors, fractures of the cranium, commotio cerebri, etc.

CORNEAL ULCER WITH HYPOPYON IN GLAUCOMA.—Klein (*Wiener Mediscinishe Wochenschrift*, April 15, 1899) describes two cases of this complication He states that if the pus in the hypopyon diminishes in quantity under the use of atropine and increases under pilocarpin, we have a sure indication to enucleate the affected eye at once; because, if the latter be left to itself, perforation of the cornea will surely result.

ON EXTRACTION OF THE LENS IN HIGH MYOPIA.—Fuchs (*Wiener Klinische Wochenschrift*, Feb. 9, 1899) and several other writers on the subject are of the opinion that the utility of the operation has now been agreed upon and that its field of application is a limited one. Out of 18,000 eye cases seen in Vienna during 1898, Fuchs saw but ten cases of high myopia in which extraction of the lens appeared to be indicated. He operated upon five of these cases, which he has reported.

DEUTSCHMANN'S OPERATION FOR DETACHMENT OF THE RETINA.—(*Beiträge zur Augenheilkunde*, 1899, Heft 40). Deutschmann has now operated 101 times by his method, which he first published in 1895, with a report of 16 cases. Out of this material he has cured 28 and improved 34. His method has been somewhat modified since his first description. He opens the eye-ball subconjunctivally and divides the vitreous and retina, separating any attachments of retina to the shrinking vitreous; he further transplants the vitreous of a rabbit into the patient's eye.

This was his original procedure. In the present extensive series he has allowed his knife to penetrate the coats of the opposite wall, thus making a counter opening.

Knapp, in Vol. 27, No. 5, *Archives of Ophthalmology*, reports 70 Discissions for Secondary Cataract. The average vision before operation was $\frac{18}{100}$. The average vision after operation was $\frac{80}{80}$. His experience is that glaucoma and cyclitis follow discission of dense membranes in the region of extraction scar. The best visual results and the least reaction follow T-shaped or + incision. He regards iridectomy as the most satisfactory treatment for the artificial glaucoma, which occurs in from one to two per cent of the cases.

CAUSE OF EXCESS OF BLINDNESS IN RURAL DISTRICTS—Howe (*Trans. Amer. Ophthal. Society*, 1898) calls attention to the fact that blindness is considerably more common in the country than in cities. He ascribes this entirely to the better understanding and prophylaxis of ophthalmia neonatorum which prevail in cities.

CAUSE OF PHLYCTENULAR OPHTHALMIA.—Michel (*Annales d' Oculistique*, tome 120, p. 257) states that it is now proven that phlyctenular ophthalmia is a purely parasitic disease, representing the reaction of the eye toward the bacillary invasion. It may be produced experimentally. By far the commonest, but by no means the only bacillus causing the disease, is the staphylococcus pyogenes aureus.

TREATMENT OF GLAUCOMA BY RESECTION OF THE CERVICAL SYMPATHETIC.—Jonnesco (*Archives des Sciences Medicales*, Nos. 3 and 4, 1898) reports the result of his method, based upon seven cases. He claims that the influence of the cervical sympathetic can produce glaucoma. His operation consists in the ablation of the superior cervical gangloin. It is applicable to all forms of glaucoma, including those in which iridectomy has failed to arrest the disease. Improvement either follows at once or only after an interval.

Abadie (*Archives d' Ophthalmologie*, 1898, p. 443) also reports the cure of a malignant hemorrhagic glaucoma by Jonnesco's procedure. Jonnesco having mentioned that hemorrhagic glaucoma was not due to the influence of the cervical sympathetic, appears to exclude it from operable glaucoma, and Abadie claims to be the first to cure a hemorrhagic glaucoma by this method.

ATROPHY OF THE OPTIC NERVE FOLLOWING ADMINISTRATION OF CERTAIN VERMIFUGES.—Sidler-Huguenia (*Correspondenzblatt fer Sshweizer Aerzte*, 1898) has earned the credit of bringing before the profession facts ignored by most practitioners and only barely alluded to in exhaustive reference works. The author states that both felix mas and the bark of pomegranate root are capable of causing, as a part of a general intoxication, a dangerous atrophy of the optic nerve. Of seventy-eight cases of general poisoning from these remedies, there were thirty-three of blindness, which was binocular in eighteen and monocular in fifteen, while four others had a marked depression of acuteness of vision. In four cases, blindness was only temporary. In these affections the pupil is wide and reactionless. The opthalmoscope shows simple optic atrophy.

NASAL AFFECTIONS IN THE ETIOLOGY OF CHRONIC DISEASES OF THE TEAR-DUCT.—Rischawy (*Wiener Klinische Wochenschrift*, 1899, No. 11) gives a long series of cases which tend to show that practically all tear-duct affections are attributable to intranasal disease. It has always been conceded that the part played by the

nose is a major one, but Rischawy claims that the relationship is absolute. From the peculiar location of the duct it can hardly become primarily affected from any source. Affections which pursue their course in the middle meatus are especially likely to involve the tear-passage. The rational is, of course, extremely simple—merely the pressure upon the passage of the products of intranasal inflammation.

CASE OF PRIMARY GLANDERS LOCALIZED FOR A LONG TIME IN THE EYE.—Gomfein (*Archives d'Ophthalmol.*, 1898, p. 699) describes a case which illustrates the fact that not a few cases of glanders are wrongly diagnosticated as syphilis or tubercle. A girl aged 12 had a lachrymal fistula of the right side, due to an injury. The fistula took on a peculiar aspect, having fungating margins which discharged profusely. No strict diagnosis was possible until the results of inoculation of a guinea pig showed that the lesion was one of glanders, and the bacillus was also shown to be present. The pre-auricular gland was swollen and the disease was spreading locally along the eyelids. The fungosites were excised and the thermocautery applied. Patient lost sight of.

CASE OF PRIMARY ACTINOMYCOSIS OF THE LACHRYMAL SAC.—This case, which is almost unique, is interesting on account of the similarity which it bears to the case of primary glanders of the lachrymal sac. Mitvalsky (*Archives d'Ophthalmologie*, 1898, p. 508) reported the case of a man, aged 65, who was a victim of bilateral dacryocystitis, followed by lachrymal fistula. The behavior of the lesions was peculiar, suggesting a fungous tuberculous osteitis. Microscopical examination of a bit of tissue revealed actinomycosis.

NEW PUPIL-PHENOMENA.—Westphal (*Neurol. Centralbl.*, Feb. 15, 1899), discussing the movements of the eyeball which accompany forced movements of the eyelids, has found that in certain nervous diseases, if the lids are held apart to permit inspection, attempts at voluntary closure are accompanied by a turning of the globe upward and outward, with narrowing of the pupil. This reaction, practically absent in the healthy, has been obtained in cases of paralysis, tabes and syphilis of the nervous system.

Piltz (*Neurol. Centralbl.*, Mar. 15, 1899) has written upon the same subject. He has found that this pupillary reaction had been noted by several observers, but no study had been made of the subject. Piltz made many examinations and found that 35 per cent. of healthy people exhibit the sign. The sign is best observed in pupils which

are not very small and which are either immobile or very sluggish to illumination.

MIKULICZ'S DISEASE.—Hirsch (*Mittheil. aus d. Grenzgebieten der Medicia und Cherurgie*, 1898, III.) gives a collective account of the peculiar bilateral enlargement of the lachrymal and salivary glands, which was first observed in 1892 by Mikulicz. Its recognition as an independent affection, however, is an event of the present day, as it has been shown to depend upon a sort of hypertrophic cirhosis of the glands, entirely similar to hypertrophic cirhosis of the liver. There have undoubtedly been numerous cases of this affection reported in past times as lymphadenoma and other kinds of tumors, but Hirsch has shown the inflammatory nature of the process.

MECHANICAL VIBRATIONS APPLIED TO THE SPINE IN SCLEROSIS OF THE MIDDLE EAR.—Grant (*British Med. Journal*, Oct. 22, 1898) states that in all cases in which deaf persons hear better in a noise or when riding on the cars, he applies a mechanical vibrator between the shoulders. He claims good results by this method.

ON RENAL PERMEABILITY IN PATIENTS WITH SENILE CATARACT.—Frenkel (*Arch. d'Ophthalmol.*, 1898, p. 416) states that when a senile cataract is neither local nor diabetic in origin, there will also be found a dimunition of renal permeability. The substance used to determine the permeability is methylene blue.

APPLICATION OF HYDROCHLORIC ACID IN AFFECTION OF THE BONY WALLS OF THE TYMPANIC CAVITY AND MEATUS.—Bull, of Christiana (*Arch. of Otology*, Feb., 1899), who proposed the use of this remedy a number of years ago, now reports on the result of some years of experience. He concludes that treatment is not indicated if the ossicles are diseased. When the dead bone is visible he applies cotton soaked in 4 per cent. solution of the acid and leaves it in contact. In case of a cavity, he introduces the cotton into it. On the following day the cotton is removed. Applications a week apart. The acid gradually decalcifies the affected bone and produces results similar to curettage. The acid is also a strong antiseptic. Cures by this bloodless method appear to range from a third to a half of all cases treated.

OKUNEFF'S METHOD OF CLOSING PERFORATED DRUM MEMBRANES.—Peltessohn (*Berliner Klinische Wochenschrift*, No. 16, 1899) has used this method with great satisfaction during the past year. Originated by Okuneff several years ago, it has been ignored

in standard works on otology, but the results of the past few years have been collected and Peltessohn regards the method as a most brilliant addition to our therapeutic resources. The method is simplicity itself. All perforations tend to spontaneous closure, but the increased proliferation of epithelium at the margins of the perforation prevents the fulfilment of this tendency. By cauterizing these epithelial accumulations with trichloracetic acid the granulations once more reassert themselves and close the aperture.

TUBERCULOSIS OF THE MIDDLE EAR.—Winkler (*Aerztliche, Rundschau*, 1898, Nos. 18-19) has treated this subject in an exhaustive manner and may have added somewhat to our previous knowledge. In regard to diagnosis, these symptoms are suspicious: 1. Sudden loss of hearing on one side, with osseous conductivity retained. 2. Paralysis of the facial nerve, with drum membrane intact. 3. Multiple perforation occurring painlessly (in ordinary otitis media, perforation single and very painful). The bacillus is found only when there is a perforation through which a little secretion may be mopped up from the tympanic cavity.

TREATMENT OF CHRONIC MIDDLE EAR CATARRH WITH THYREOIDIN.—Herman (*Deutsche Medicinische, Wochenschrift*, 1898, No. 49) claims to have had encouraging results from the use of thyreoidin in that form of chronic middle-ear disease which is associated with arterioschlerosis. He believes that in these cases the ear disease may be reached through the circulation. He has no doubt that in selected cases of this type of affection, the best results may be attained.

DEPENDENCE OF AGORAPHOBIA AND OTHER MORBID FEARS UPON LESIONS OF THE EAR.—Lannois and Fournier (*Ann. d. mal. de l'oreille, etc.*, 1898, Vol. II., p. 286) report ten cases in which they attempt to show the connection between agoraphobia, etc., and those affections of the ear which are accompanied by vertigo and tinnitus aurium. They claim that agoraphobia is not a primary affection, but that in the presence of a neuropathic soil it may be induced by various conditions, and that in a large proportion of cases the exciting cause will be found in the ear. When these manifestations can be traced to other exciting causes, it may still be observed that lesions of the ear tend to prolong the duration of the attack.

RADIOGRAPHY IN ITS APPLICATION TO THE TOPOGRAPHY OF THE INTERNAL EAR.—Guillo and Jacques (*Revue hebdom. de*

laryngol. etc., Jan. 14, 1899) have applied radiography to the petrous bone as an aid to the study of the topographical anatomy of the labyrinth without previous mutilation. The process may be associated with previous injection of the vessels. In the radiogram which accompanies the article, all the topography of the osseous portion of the ear is demonstrable, the extreme density of the petrous bone contrasting with the lighter areas which denote the various cavities and foramina.

AUSCULTATION OF THE EAR IN MASTOID SUPPURATION.—Ontino (*Medicin der Gegenwart*, May 1, 1899, p. 250) has modified the method of Okuneff as follows: He uses two otoscopes provided with an olive-shaped addition for the physician's ear, with a funnel-shaped appendage which is placed in opposition to the mastoid process. An assistant strikes the patient's skull with a tuning fork, and if pus has formed within the mastoid antrum its presence may be recognized through the improvised stethoscope.

RELATION OF HYSTERIA TO THE EAR.—Flatau (*Samml. Zuangloser Abhandlugen der Ohrenkrankheiten* 3, 5-6, 1899) says that Gradenigo brought this subject up to 1895. He gives a resumé of the latter's study, with his own criticisms. He concludes that harmless psychical and suggestive therapeutics promise, on the whole, better all-round results than mechanical and surgical interference. The pretence of applying the cautery will often produce striking results. Such methods are also very valuable for diagnostic purposes.

STATISTICS OF THE PERNICIOUS COMPLICATIONS OF SUPPURATIVE EAR DISEASES AND OF MASTOID OPERATIONS.—Teichmann (*Zeitschrift. fur Ohrenheilkunde*, 1898, xxxiv., No. 4) has compiled statistics from all the Prussian hospitals during 1894 and 1895. In 1894 there were 709 mastoid operations, with 74 fatalities (10 per cent.); in 1895 there were 930 operations, with 72 fatalities (7.8 per cent.); total fatalities, 146; average annual mortality, about 9 per cent. There were, however, in these two years, 111 deaths from complications of ear suppuration without previous operation, which makes the total fatalities of both years 257. Adding the operated and non-operated cases, we have 1,750, with a total mortality of nearly 15 per cent.

STATISTICS OF OTOGENOUS CEREBRAL ABSCESS.—Ropke (*Zeitschrift. fur Ohrenheilkunde*, 1898, xxxiv., 2-3, p. 95) has collected notes of 142 cases of these abscesses from literature in which operat-

ive interference was practical. According to the tabulated results, 82 of these cases died—all but one or two of primary mortality. In the case of a number of others there was no report as to the ultimate results. The mortality is therefore considerably over one-half.

Korner (*Munchener Medicinische Wochenschrift*, No. 14, 1899) describes, under the subject of intracranial complications, phlebitis of the sinus, abscess of the temporal lobe and extradural abscess of the cerebral fossa. He describes recoveries from all three forms under operative procedures. At present, about one-half of these intracranial suppurations recover under suitable management.

Brindel (*Revue Hebdomadare de Laryngologie, etc.*, April 29, 1899) has studied the lesions of the internal lamina of the cranial bones in middle ear suppuration. He found lesions of the inner table 36 times in 142 mastoid operations. They occur more frequently with chronic than with acute otitis. The lesions in question are such as result in necrosis of the inner table. When the latter tissue participates in the suppuration of the middle ear, we do not necessarily find new symptoms. The erosion of the inner table naturally exposes the meninges to the infectious action of the pus with which the tympanum, antrum and tympano-mastoid passage abounds. Brindel has carefully recorded notes of all mastoid operations since November 1, 1894. They number 142. Of these, 82 were for chronic otitis. In every case the tympanum and antrum were laid open. In 2.: of the 82 cases (25 per cent.) the inner table was involved. There were 60 mastoid operations for acute otitis, and in 14 cases (23 per cent.) the inner table was involved. In 12 of the 14, it was only necessary to open the antrum, while in the other two both antrum and tympanum were opened. In the 36 cases of necrosis of the inner table, 12 were free from actual participation of the mastoid process. Of the 24 cases in which the mastoid process participated, 21 were cases of acute otitis media. The mastoid was perforated outwardly or through the meatus twelve times. Twice there was a perimastoid abscess in which the route of the pus could not be traced. In five cases, Bezold's mastoiditis (from perforation of the digastric fossa) was present. In six cases there was diffuse osteitis of the entire mastoid apophysis.

Barr (*Archiv. fur Ohrenheilkunde*, 1899, xlvi., p. 55) describes cases of extradural abscess, with internal osseous lemella and sigmoid sinus both intact.

Herman, of Warsaw, has published cases of fatal brain complications of otitis media, in the *Zeitschrift fur Ohrenheilkunde*, xxxii, p. 1. During 8½ years there were six cerebral and three cerebellar abscesses, thirty-one cases of sinus thrombosis with pyæmia (eight recoveries) and nineteen cases of meningitis.

OPHTHALMOSCOPY IN THE DIAGNOSIS OF ENDOCRANIAL COMPLICATIONS OF OTITIS.—Gradenigo (*Annales des Maladies de l'oreille, etc.*, Dec., 1898) states that in about one-half the endocranial complications of ear suppurations we find lesions of the optic papilla; this papillitis seldom or ever occurs in uncomplicated suppurations. In some extradural abscesses the papillitis may be the sole symptom. The mechanism is obscure. After the endocranial lesion is successfully treated the papillitis disappears.

CEREBRAL COMPLICATIONS OF OTITIS MEDIA.—There has been a large and constantly increasing literature upon endocranial complications of ear diseases during the past year. Waldvogel (*Deutsche Medicinische Wochenschrift*, No. 35, 1898) recognizes four varieties of cerebral complications in children. Two are mild and consist only of cerebral hyperæmia, with slight exudation. In the third class, otorrhœa persists after paracentesis, and the signs of severe meningitis co-exist, although these cases recover at the end of four weeks. In these cases the exudation in the interior of the cranium is nonpurulent and the course of the disease is largely afebrile. The fourth class of cases is essentially fatal after some ten weeks. Ependymitis granulosa and acute hydrocephalus occur, and the ossicles are destroyed. These cases all refer to simple complications and not to extension of the disease proper into the brain.

The editor of the section on otology, in *Progressive Medicine*, March, 1899, speaks of the amazing number of cases reported during the past year, of intracranial abscess, meningitis and sinus thrombosis following otitis media, which cannot fail to develop preventive treatment of such conditions. With regard to characteristic symptoms, time to operate and choice of operation, authorities differ considerably.

SINUS THROMBOSIS.—Thus far, 139 cases have been reported, with 44 fatalities, the remaining 95 being recoveries.

ANTRECTOMY.—Milligan (*Brit. Med. Journal*, Oct. 22, 1898) has performed this operation 150 times. In 78 cases he used Stackes' method, with 65 complete recoveries, and in 72 cases he used

Schwartze's method, with 47 recoveries. Out of 150 cases, 102 were for chronic disease. As far as hearing is concerned, some cases were improved and some made worse, while in the majority it was unchanged.

A CONTRIBUTION TO THE CLINICAL STAGES AND TO THE TECHNIQUE OF THE OPERATION FOR SINUS THROMBOSIS.—Whiting (*Archives of Otology*, Vol. 27, No. 26), who has had an extensive experience with sinus thrombosis, formulates the clinical history and operative procedure of this grave complication. He divides the history into three stages:

First.—The presence of a thrombus, parietal or complete, not having undergone disintegration, and accompanied by slight or moderate pyrexia, rigors being usually insignificant or absent. Diagnosis is usually made in this stage, consequent on operation for mastoiditis, and the only safeguard against encountering the increased gravity of the second stage is to operate immediately upon the recognition of the first stage.

Second.—The presence of a thrombus, parietal or complete, which has undergone disintegration, and resulting systemic absorption, characterized by frequent rigors and pronounced septicopyæmic fluctuations of temperature.

Third.—The presence of a thrombus, parietal or complete, which has undergone disintegration, with systemic absorption, accompanied by rigors, rapid and great fluctuations of temperature, central and peripheral embolic metastases, terminating usually in septic pneumonia or enteritis.

He gives a complete and exhaustive description of the symptoms of each stage and a clear exposition of the operative procedure. In concluding the article, he says that it is not too sanguine an expectation to believe that, as our knowledge of symptomotology and technique improves, there should be no fatalities in the first stage of sinus thrombosis, that the second stage should furnish only an occasional fatal result, and that the third stage, in the absence of gangrene of the lung and purulent meningitis, should be regarded as a still hopeful surgical procedure.

ADDRESS OF THE PRESIDENT.

BY C. R. P. FISHER, M.D., BOUND BROOK, N. J.

THE CENTURY'S PROGRESS IN MEDICINE.

As we approach the threshhold of another century, looking eagerly forward to see what advances will be made and what additions to our armamentarium we can count upon, it is fitting that we should pause and, glancing backward, endeavor to see just how much real progress we have made in our never-ending battle with disease and death during the cycle so near completion. While it is undoubtedly true that medicine at the present day can claim to be an exact *science* with greater truth than ever before in the history of the world, there must always, from the very nature of things, be many factors to prevent the practice of the *art* from reaching absolute perfection. The time will never come when we can fold our hands, gaze proudly upon our work and say "It is finished." From the beginning of time, ever since "sin entered the world and death by sin," mankind has been almost instinctively endeavoring to alleviate suffering, to restore shattered health, to postpone the inevitable end of life. Probably, at first, each one ministered as far as possible to the wants of the other, but as time went on and the human family increased in number, natural aptitude and inclination led some individuals to become more skillful in this respect than their fellows, and hence they became "physicians."

Previous to the time of Hippocrates (460 B. C.), the practice of medicine was so mixed with all sorts of superstitions, incantations, charms, etc., that it scarcely deserved the name of the healing art. To the master mind of the great "Father of medicine" do we owe its divorce from all these and its establishment on a firm foundation, he being the first to insist that the practice of medicine be based on the dictates of reason and experience. Of course, his ideas were not universally accepted, and during the succeeding centuries there were many attempts to found "systems" of medical practice, based on more or less fanciful theories, some of them finding many adherents for a time. But one after another, like the house built upon the sand, they "fell, and great was the fall thereof."

Through it all, however, the tiny thread of medical truth worked its way, sometimes almost but never entirely severed, until the invention of the printing press made it easier to record and disseminate the accumulated store of medical knowledge. Slowly, but surely, the grand edifice of rational medicine began to be reared, and many and willing were the artisans. It would far transcend the limits of the time at our disposal to even mention many of the men who were prominent in the work prior to the beginning of the nineteenth century, and at any rate it is chiefly with medical progress during the latter period that we have to deal this evening. Suffice it to say that the science and art of medicine entered the nineteenth century marching well abreast of the other arts and sciences.

In order to form a fair estimate of the progress made during the century, let us divide the subject of medicine as a whole into the three parts—Practice of Medicine, Surgery, and State Medicine—and consider them in the order named, bearing in mind that in a field so vast it will be impossible to do more than touch upon the more salient points.

To begin with our first division, Practice of Medicine. The student of physical diagnosis at the beginning of the century was ignorant of both auscultation and mediate percussion (though direct percussion was first brought into notice by Avenbrugger in 1761), and in their stead was obliged to rely on palpitation, inspection, etc. The discovery of auscultation by Laennec, in 1819, and the introduction of mediate percussion by Piorry, in 1828, have been of untold value in the study and treatment of diseases of the lungs, heart and blood vessels. In combination with the study of morbid anatomy, thus verifying or disproving conclusions reached by these means during life, physical diagnosis has, in the hands of experts, become almost marvellous in its exactness.

The discovery of albuminuria by Richard Bright, in 1827, opened up a wonderful mine of knowledge for the clinician, and further studies in that direction cleared up many puzzling problems. The discovery of casts by Vogla and others, in 1837-8, stimulated interest in the microscopic study of the urine, rounded out the great work of Bright, and while further research upon these lines by pathologists has demonstrated that instead of being a disease *per se* as Bright supposed, albuminuria is but a symptom of several diseases of the kidneys, the fact remains that his contribution to the general fund of

demonstrated facts has been a long stride in the direction of making medicine an exact science. The much more recent introduction of the cystoscope and ureteral catheterization, has enabled us to demonstrate the state of the whole urinary tract during life and to accurately locate any morbid process therein. In 1849, when Thomas Addison proved the existence of a constant lesion of the suprarenal capsules in the disease which bears his name, a great deal of light was shed upon a hitherto obscure condition, though, unfortunately, we have yet to discover a treatment which will give permanent benefit.

The invention of the ophthalmoscope by Helmholtz, in 1851, marked an era in the study, diagnosis and treatment of diseases of the eye, and has been of especial benefit to general medicine in the diagnosis of various maladies, since it has been found that many morbid conditions produce characteristic changes in the interior of the eye. The hypodermic syringe, first used by Wood, of Edinburgh, in 1843, has proven its usefullness in so many ways, being in almost daily use by every physician, that it is difficult for us to realize that it was absolutely unknown only sixty years ago.

Although crude attempts to examine the larynx by reflected light had been made far earlier, it was not until 1884-5 that Manuel Garcia first called attention to the proper use of laryngeal mirrors, and soon afterward Czermak, of Pesth, perfected the laryngoscope as we know it today, thus furnishing another triumph for nineteenth century medicine. The aspirator of Dieulafoy (1869) deserves mention as a valuable addition to our list of instruments, being so far superior to the time-honored trocar and canula in many cases. Although it had been proposed to apply the thermometer to clinical uses many years previously, it was not until nearly the middle of the century that the invention of the self-registering thermometer made the systematic study of temperature in disease possible, and thus placed another instrument of precision at our disposal.

Prior to 1822 it was believed that the brain acted as a whole at all times, but since that time, thanks to the labors of such men as Broca, Hughlings Jackson, Fritsch, Hitzig and Charcot, many facts in regard to brain localization have been discovered and recorded, furnishing both the physician and surgeon invaluable aid in the diagnosis and treatment of cerebral diseases and injuries. The influence of Virchow's theory of "cellular pathology" and of Pasteur's labors in elaborating the "germ theory" has been enormous, and needs but to

be mentioned here since most of their work has been done during the last quarter of the century, and is therefore fresh in the minds of all. Pasteur, though not a physician, has left an indelible impression upon medicine, outside of his other work, his treatment of hydrophobia being the only one which has ever offered even hope of cure in this dread malady.

In 1880, when Dr. Joseph O'Dwyer first demonstrated that laryngeal stenosis could in many cases be overcome by the use of the tubes which now bear his name, and without resorting to tracheotomy, it became possible to save many lives which otherwise would inevitably be lost. Apart from the fact that intubation is more easily performed than tracheotomy, many parents consent to the use of the tubes who would never allow the knife to be used, and even where death is inevitable, the little patient is in many instances spared the horrors of the desperate struggle for breath.

One of the greatest advances in the whole range of our subject is also very recent, so recent, indeed, that the discussion of its merits is hardly closed; but the weight of evidence seems to be so overwhelmingly in its favor that we have no hesitation in classing it as above. I refer to the serum treatment of diphtheria. While diphtheria has probably been a scourge to mankind since the earliest ages, we find no passibly accurate descriptions of it until the fourteenth or fifteenth centuries, and it was not until the present century that the disease was accurately observed, studied, described and classified as an entity. From the time it was thus described by Bretonneau (1821–26) until the present time, the wide-spread prevalence of the disease, its infectiousness and the almost utter helplessness of the profession in the presence of its more malignant forms, made diphtheria the subject of an enormous amount of investigation and discussion, which the discovery of its specific micro-organism, by Klebs and Loeffler, in 1883–4, served to increase.

While the presence of the Klebs-Loeffler bacillus in a given case is held by a majority of the profession today to complete the diagnosis of diphtheria, it unfortunately happens that many cases are complicated and rendered more malignant by the presence of other organisms which are even further beyond our power to combat. The treatment of diphtheria by antitoxin will shine out in years to come as one of the greatest triumphs of nineteenth century medicine. It is unfortunately true that physicians are not unanimous in accepting

this truth, but it is also unfortunately true that they are not unanimous in their opinions regarding many other truths, as witness the fact that today, a hundred years after Jenner discovered vaccination, there are medical men who deny that vaccination is efficacious in preventing small-pox. That there is a brilliant future for serum-therapy there is little room to doubt, though the anti-diphtheritic serum is the only one which is as yet on a firm basis, and it is to be hoped that antitoxic serums will yet be found for many other diseases.

Although the treatment of the insane by other means than simple restraint, made some progress during the eighteenth century, and especially during the latter half, its advancement during the present century has been very great, and the condition of this most unfortunate class of patients, whether curable or incurable, is better today than ever before in the history of the world.

There is a something about surgery, something in the rapidity with which its adaptation of means to ends produces visible results, which appeals strongly to the lay mind. The physician who, with skill and patience, pilots a case of typhoid-pneumonia to recovery, saves a life no less surely than the surgeon who performs a successful operation in the nick of time upon a patient with appendicitis, yet in the former instance there is a lack of the brilliancy and *eclat* which produces such an impression upon the interested parties in the latter case. So it is with the history of the advances in surgery, especially those made during the present century; for those advances have been so brilliant, so rapid, so startling, that they have at times quiet overshadowed the quieter progress of internal medicine. It is true beyond doubt that surgery has made more real progress during the nineteenth century than it had made in any ten previous ones; not but what there were able and brilliant surgeons in the seventeenth and eighteenth centuries—men willing and eager to dare and do their utmost in the light of the knowledge at their command. But those were the days of "laudable pus," of "hospital gangrene;" days when the peritoneum was greatly respected as a membrane which it was wise to let severely alone; when many operations which are performed daily at the present time were unknown, or, if dreamed of, thought to be beyond the bounds of possibility. The man who could operate with the greatest rapidity; who could shorten the period of agony for the writhing victim to the utmost extent, was the best surgeon, and the patients who were strong enough to stand the terrible ordeal of the

operation and the resulting suppuration and "surgical fever," got well. Of the status of surgery at the beginning of the century, Dennis says: "The surgeon of 1800 had little more knowledge than had Hippocrates of the chief causes of danger after operation, such as suppuration, pyæmia or tetanus, and groped wildly for means to avoid them. He had no clinical thermometer, and could only guess at temperature and fever; no hypodermic syringe; no anæsthetic; no definite knowledge of the importance of blood-saving, or of the best means of doing it. He knew nothing of plastic surgery, of tenotomy, of the ophthalmoscope, or of the use of the microscope in diagnosis, and had only just learned how to ligate arteries and to treat ordinary wounds in a simple and sensible way. The really great surgeon of that day who was bold, cool and skillful, could perform most of the great operations, such as amputation, ligation of large arteries, removal of tumors, Cæsarian section, and the like; but such men were few and far between."

Although the literature of surgery naturally increased largely in volume during the early decades, and although considerable progress was made in devising new operations and perfecting old ones, we find nothing really epoch-making in its history until near the middle of the century. The first ovariotomy, by McDowell, in 1809; the first subcutaneous tenotomy, by Delpech, in 1816; the first lithotrity, by Civiale, in 1824, are well-known examples of this progress. Here must also be mentioned the operation for vesico-vaginal fistula, devised by Dr. J. Marion Sims, which was a long step in advance, and which practically laid the foundation of modern gynæcology. In 1846, when Dr. Henry J. Bigelow read his paper on "Insensibility during surgical operations produced by inhalations," one of the greatest, if not the greatest, boon ever given by a merciful Providence to suffering humanity was made public, and it is impossible for us at the present day to realize the furore which the discovery created throughout the civilized world. It has become a matter of course for us to have our patients anæsthetized when about to perform any operation involving much pain; and while the patient is spared the suffering, the nerve of the operator is not taxed by the knowledge that each stroke of the knife is inflicting untold agony. It is unnecessary to reopen the old discussion as to whether the honor of the discovery of ether anæsthesia belongs to Long or Morton; we are proud to know that it was the work of an American.

While general anæsthesia has been of such enormous value to the surgeon as well as to the patient, there have always been serious objections to its use in certain conditions, it being impossible to resort to it in cases of very weak heart, when tumors are located so as to impede respiration, etc., while in many minor operations the discomforts of anæsthetizing seem out of proportion to the benefits derived; hence, the discovery of the local anæsthetic effects of cocaine by Koller has rounded out our resources in this direction and deservedly occupies a high place in the list of brilliant advances in our art.

While the discovery of anæsthesia broadened the field of surgical work immensely, rendering so many more operations possible, and enabling the surgeon to operate with so much care and regard to details, the fact remains that the mortality from operations of any magnitude was still excessive; for example, so late as 1881, the average mortality of major amputations was given at thirty-three per cent. When Joseph Lister treated his first case of compound fracture of the leg with antiseptic dressings in 1865, the first step was taken toward revolutionizing the whole practice of surgery. While the fact remains that his first efforts were necessarily crude, that he was ignorant of the exact nature of the foes he was fighting, ignorant even of the usual habitat of those foes, the glory of being the pioneer in the field of antiseptic surgery will ever be his; and surgeons—nay, all mankind, must revere the name of Joseph Lister for all time to come. Later, when Koch, as the result of his bacteriological research, furnished scientific proof of the soundness of Lister's reasoning, the new surgery was placed on a sound basis; and although methods have changed, and may still further change, the principle will endure. Anæsthsia and surgical cleanliness will ever remain the "bright particular stars" in the firmament of the nineteenth century surgery, and it will always be difficult to determine which is the brighter. Their combined employment has rendered so many new operations and procedures practicable, that the mere enumeration of them would be impossible here, and most of these advances have been made within the memory of even our youngest members.

Since so many and such marvellous discoveries in electrical science have been made during recent years, it is not strange that the latest addition to our list of practical advances should come from that source, and the skiograph has been received with enthusiasm and

employed by surgeons the world over. In the practice of obstetrics we find that immense gains have been made in the treatment of abnormal labors where interference is necessary. The use of anæsthetics greatly facilitates any operative measures, not alone by rendering such measures painless, but also by producing relaxation of the soft tissue. The proper use of antisepsis greatly diminishes the danger of puerperal fever, the fear of which forever haunted the older obstetricians. Then, too, great improvements have been made in instruments used, especially in the forceps, the axis-traction forceps of Tarnier making possible the saving of many lives which might otherwise be sacrificed. The revival of the operation of symphysiotomy is also to be noted as an advance, since when done under modern antiseptic precautions it is comparatively free from risk.

Hygiene, or preventive medicine, dates from the earliest times, the Mosaic laws on this point being both elaborate and stringent, but governmental control in such matters, public hygiene or State medicine, may almost be said to be a product of our own century. At any rate its development during this period has been most rapid, and today all civilized governments, realizing its enormous value, vie with each other in the thoroughness with which they make practical application of the latest scientific teachings along this line.

The beneficial effect of the proper enforcement of modern sanitary laws has become so apparent, even to the laity, that our health boards are clothed with almost autocratic powers, and their right to supervise the water supply, drainage (both public and private), the disposal of garbage, regulation of the food supply, the arrest of infectious diseases, etc., is not only unquestioned, but their directions are almost invariably cheerfully carried out. Our own country especially, where "government of the people, by the people and for the people" exists to greater perfection than anywhere else in the world, stands high in this respect, and some of the states, notably Michigan, Massachusetts and New Jersey, possess codes which are models according to our present knowledge of sanitary science. It is to be regretted that we have no National Board of Health to secure uniform hygienic supervision of our foreign commerce and to assume control in case of interstate epidemics.

One of the logical sequences of the advances in medicine during the century about to close has been the rapid growth of specialism. The field has grown so broad that it is a physical impossibility for

any one man to be expert in all departments, and while the general practitioner is in no danger of becoming extinct, it is to the advantage of all concerned that he is enabled to refer his cases of obscure eye trouble to the oculist or his cases of ovarian cyst to the laparotomist. The average graduate in medicine is not fitted, either by natural inclination or ability, to become a specialist; the true specialist is born, not made, yet other things being equal, the man whose knowledge of medicine is broadest will make the best specialist.

In the matter of medical educational methods, vast improvement has been made. One hundred years ago medical colleges were few and far between, were poorly equipped and required absolutely no preliminary education. Only a few years ago it was possible for a man to obtain the degree of M.D. from a reputable college by presenting evidence of having attended two courses of lectures of five months each and of possessing the ability to read and write. Today most of our medical schools insist, as a requisite for matriculation, that the student shall possess a good general education and that he shall pursue a four years' graded course of study in medicine before being allowed to take his final examinations.

Instead of simply being required to do a certain amount of dissecting and showing by a perfunctory oral examination that he has listened to a given number of didactic lectures, he is required, as a part of his course of study, to do practical work in the different departments, and is taught how to apply the knowledge he has acquired. The raising of the standard of medical education cannot fail to be of incalculable benefit and it augurs well for the medical progress of the twentieth century. There remain, however, two things which can never be taught in the schools—experience and judgment. The youth receiving his diploma from the dean of his college today is, with the exception of experience, far better equipped for his life work than the man who had grown grey in the harness in 1800. As for judgment, or common sense, we cannot do better than to paraphrase Holmes: "Science makes excellent furniture for the second story when the first floor is furnished with common sense. If this be lacking, the more science a man has the worse he is off."

The foregoing brief and necessarily incomplete resumé of the progress made in medicine during the nineteenth century serves to show that our beloved profession has been no laggard in the race. The century has been a marvellous one in the rapidity and scope of its

achievements in all that makes for civilization, for the highest good of mankind, but we are justified in believing that medicine has more than held its own and that the medical historian of a hundred years hence will have ample reason for saying, in *his* turn, "The science and art of medicine entered the *twentieth* century marching well abreast of the other arts and sciences."

ESSAY.

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TRAUMATIC NEURASTHENIA.

Under the appellations of psychoses and neuroses may be included all morbid nervous phenomena. The word psychosis (from *psuke*, the mind) signifies a morbid mental state. Commonly it is in use to express an insanity, but it may also include morbid mentality not recognized as true insanity. The psychoses are, for the most part, described as functional disorders, but degenerative structural disease of the encephalon may develop psychic abnormality, thus affording a material basis for the production of a psychosis which may be said to be organic.

The word neurosis (from *neuron*, a nerve) is defined by Gould as "a disturbance of the nerve centres or peripheral nerves not due to any demonstrable structural change." This definition is arbitrary and not in harmony with the meaning of the word. A neurosis may be either functional or organic—functional when the morbid condition is not dependent upon gross structural changes, and organic when a material basis for disease exists.

Traumatic neurosis (from *trauma*, a wound, and *ueuron*, a nerve) is a name applied to a condition where nervous disorders of a persistent or chronic character are supposed to be the result of shock, or injury, or both. Various names have been suggested to express the pathology of this condition, such as "spinal concussion," "railway spine," "railway brain," "traumatic hysteria," "traumatic neurasthenia," etc. The words traumatic neurasthenia (*trauma*, a wound, *neuron*, a nerve, and *astheneia*, weakness) appear to me to represent best of the names suggested, the conditions of the morbid state under consideration. The late George M. Beard first described and accurately grouped the symptoms characteristic of the disease now universally known as neurasthenia. He demonstrated that certain physical symptoms, hitherto commonly attributed to functional diseases of viscera, were in reality dependent upon morbid weakness of the

nerve centres. Beard was a persistent and insistent observer and writer. His contributions to the subject were many and able and his name is indissolubly connected with neurasthenia.

The word traumatic is prefixed to the word neurasthenia to distinguish that form of the disease which is developed when the exciting cause is an injury, with shock to the body. Even in traditional medicine the influence of physical trauma was recognized as a factor in the production of nervous disorder. The nervous evils incident to "concussion of the spine" were commented upon by surgeons a century ago. A defective pathology naturally begot a faulty diagnosis. Failure to discriminate between gross nervous organic lesions and subtile cell change of inappreciable degree was their mistake. Boyer, Bell, Astley Cooper, Abercrombie, Mayo, Ollivier and Lidell all reported cases.

In 1818 Sir Benjamin Brodie recognized forms of hysteria following injuries. In 1866 Erichson first wrote of nervous disorders which follow railway accidents. He contended that a force applied to the spine not sufficient to fracture it, or to lacerate or contuse the spinal cord and membranes, would produce various grades of spinal meningitis and molecular spinal cord disturbances, resulting in peculiar nervous disorders. His lectures on "Certain obscure injuries of the nervous system commonly met with as the result of shocks of the body received in collisions on railways," were the first definite contributions to the literature of a subject which, at the present time, is simply immense. His dissertations upon this subject created widespread interest and considerable controversy.

The experience of the majority of surgeons in this new field of medical science was limited. Opportunities for observation were not then so abundant as they are today. As a consequence, Erichson's promulgations for a time were practically unchallenged. In 1875 the same author issued his book on "Concussion of the Spine," which probably has caused as much discussion as any monograph of modern times. His theories were bitterly assailed and sharply refuted. Erichson wrote as a surgeon, not as a neurologist, and at a time when a correct neuro-pathology, or even an approach to it, was unheard of. In the light of our improved knowledge of nervous disease, we now look upon Erichson's contentions as ideal, confused, unsatisfactory and, in the main, incorrect.

In 1878 Charcot called attention to the development of hysteric

symptoms as a sequal to physical injuries, which he describes as a species of "local hysteria." His deductions are akin to those of Brodie, promulgated sixty years before. In 1882 Page wrote on "Injuries of the spine and spinal cord," and took issue with Erichson's theories, particularly the theory of the "molecular disarrangement" incident to spinal concussion, with the grave consequences imputed to it. Page was a railway surgeon and his opportunities to observe the effects of railway accidents were considerable. His study of the question was careful and intelligent, and his deductions on the whole are plausible and withal reasonable, and coincide to a considerable extent with the doctrines commonly accepted today.

Although Erichson was not the first writer on spinal concussion, yet in the particular field where this condition was held to be due to railway injury, he certainly deserves the credit of being a pioneer. Page's writings were followed by those of a host of others, among whom may be mentioned Dana, Walton, Oppenheim, Strümpell, Clevenger, Bartlett, Corning and Bailey.

From a consideration of the extensive literature on this subject, it appears to 'me that the majority of writers agree: First, that no particular nervous disease can be attributed directly to trauma. Second, that nervous disease may follow injury or shock, either separately or associated—more commonly associated. The use of the word functional in connection with the neuroses and psychoses is not without objection; indeed, it is a question whether any disease is truly a dynamic one. Structural changes in all probability attend the conditions just named confined to the neuron or nerve cell—minute lesions, problematical and undecided—and which for the present cloud the genesis and type of nervous disorders.

Traumatic neurasthenia may then be defined to be a disorder of the nervous system of a so-called functional character, attended by loss of vitality, weakness and exhaustion of the nerve centers, the exciting cause being trauma or shock. The distinctive symptoms which attend structural disease of nervous tissue are positive and objective in character, while the symptomatology of neurasthenia is practically subjective. While very frequently found in association, traumatic neurasthenia and traumatic hysteria are not of absolute identity. Oppenheim, in his monograph on "The traumatic neurosis," describes a condition in which the symptomatology is not typical of either neurasthenia or hysteria. The symptoms are subjective at first, but

in time become more or less objective. The secondary results in the cases studied by this writer would warrant the assumption, from their objective character, that they are the products of structural nervous disease and have no claim to be classed with the functional neuroses.

There is no doubt that many cases occur in which the blending of neurasthenia and hysteria is so intimate that a correct nosology is impossible. Such cases may conveniently be designated as examples of traumatic hystero-neurasthenia. The pathology of traumatic neurasthenia is barren of objective data upon which to base an accurate explanation of its symptomatology. The disease rarely, if ever, is fatal *per se*, and hence opportunity to study its morbid anatomy has been *nil*. When death has resulted in a neurasthenic patient it is commonly attended by complications alien to the characteristic symptoms of traumatic neurasthenia, so that as far as our present knowledge goes we are not aware of any distinctive post-mortem appearances or histological changes. But it is a fair inference to draw from a clinical study of the disease, that as its essential characteristic is exhaustion and loss of vitality in the nerve centres, that the morbid anatomy of the disease is to be looked for in the nerve cells—structural changes caused by deficient nutrition of the cell nucleus, from vitiation of the cell protoplasm.

The essential anatomical substance involved in nervous irritation is the neuron or nerve-cell, and with the recent light cast upon the previous darkness of nerve-cell anatomy by the successful experiments of Golgi and Cajal, we are enabled to study a diseased nerve-cell to a greater advantage, from our more exact knowledge of a normal one. Hitherto, nervous pathology has been largely speculative. It may truthfully be said that this branch of medical science has been born within the past twenty-five years. It is as yet in its infancy, but it gives promise of great development in the near future.

The character of the causative accident and the nature of the injury received, are influential in the development of traumatic neurasthenia. Railway accidents are especially potent—both recognized factors—trauma and shock being present. The suddenness of a railway catastrophe, where from a position of physical rest and quietude, without warning or chance for preparation, the muscular ligamentous and osseous systems are excited to involuntary action to resist the power of unexpected force, is well calculated to disturb the

nervous system even if physical injury is not sustained. The victim of such an accident is taken at a disadvantage; no opportunity is afforded for voluntary adaptation of the body to prevent prevailing conditions. The shock to a neurotic temperament under such circumstances is demoralizing, and extremely liable to be followed by unpleasant, and in some cases, intractable nervous disorders.

Shock is not generally recognized as a common cause of traumatic neurasthenia, and it is claimed that it is rare to observe this disease in its typical form, with nervous shock or fright as a causative agent, but in my experience I have met with many cases of well-marked so-called traumatic neurasthenia, free from any appreciable tissue trauma, and the only cause which would explain the existing symptoms was the history of subjection to accident in which the shock to the nerve centres was severe. In the great majority of cases of this disease, some form of trauma exists, where shock is apparently the chief disturbing cause. The apperception, through the special senses, of profound impressions sudden and unexpected, will produce that variety of shock described as psychical.

A sudden and powerful depression of the general nervous system induced by a severe tissue injury will produce a physical or, as it is frequently termed, a surgical shock. The secondary consequences of the former, psychical, are apt to be represented in the symptomatology of traumatic hysteria, and of the latter, physical, in traumatic neurasthenia. But the circumstances of accident are such that cause usually exists for the excitation of both varieties of shock, and thus will exist a duplex nervous irritant that will affect both mind and body.

According to the prominence of psychical or physical shock will the symptomatology follow hysteria or neurasthenia. It is rare to observe one form of shock to the entire exclusion of the other. It is the common custom of writers on this subject to differentiate between traumatic hysteria and traumatic neurasthenia, but I fail to see why a difference should be made so considerable as to warrant as separate classification. These disorders are so frequently blended, especially in etiology, that it is vastly more convenient to consider them together.

In a majority of cases we meet with of traumatic neurasthenia, uncomplicated with the additional symtomatology of nerve lesions attended by degenerative changes, we find that the trauma present is not of particular significance, and its import is such that we would exclude it as a factor in the causation of the subjective nervous

disturbance present. The circumstances attending the accident at which the trauma was received will generally show cause for severe shock.

The scenes attending a railway wreck are dreadful and harrowing to the senses. The great force involved, misdirected, expands itself in the destruction of animate and inanimate objects with which it is brought in contact. Collisions, derailments and other descriptions of accidents are agents for the causation of terrible consequences. Exposure to such conditions in a person, perhaps, of neurotic diathesis, even if physical injury is avoided or escaped, cannot but exert a powerful sensory impression upon the mind, which subsequently may reflect in secondary subjective symptoms the severity of the impress.

For the production of the conditions described as traumatic neurasthenia, it appears to me that a predisposing and an exciting cause must exist: First.—A pre-existing neurotic diathesis, either hereditary or acquired. Second.—Shock or injury, or both.

Neurotic heredity is an undoubted factor in the causation of nervous diseases. All diseases have more or less nervous implication, which may be co-existent or secondary. The initial disease may disappear and its nervous implications remain as sequelæ.

From a large experience is cases of "accidental" surgery, particularly in railway surgery, I am firmly convinced that to produce persistent secondary nervous consequences, a pre-existing, possibly latent, neurotic diathesis is essential.

Shock may be defined to be a sudden depression of the vital functions of nervous character, influencing the heart and general circulation. It may be psychical, physical or general vital in character; psychical, if solely emotional; physical, if traumatic; in combination, both forms acting, it may be designated general vital shock. The pathology of shock is inexplicable. Injury is causative as a factor or ally of shock. In a neurotic person subjected to accident, the disposition to nervous disorder being intrinsic, shock, psychical, physical or general vital, with or without co-existing trauma, may produce neurasthenia. In a person exempt from neurotic diathesis, no such secondary nervous phenomena are probable.

The symptoms of traumatic neurasthenia may be classified according to the organic functions disturbed. Symptoms due to nervous organic lesion, or to any other nervous disease other than nervous exhaustion, cannot be included in the group of particular symptoms

which are ascribed to traumatic neurasthenia. Circumstances which attend the accident, its character, the environments of the patient, his physical condition at the time of the accident, whether awake or asleep, drunk or sober, all have an influence in the determination of the character of the symptoms evolved. A person asleep or under the influence of alcohol, will escape much of the shock incidental to accidents.

Physical prostration with shock, which may be both psychical and physical, is the common condition immediately after the accident. Consciousness is not lost, but the senses are dulled. Palor, tremor, dizziness, nausea and vomiting, cold, moist skin, rapid pulse, a sensation of faintness, are experienced. To these symptions may be added the local symptoms of a physical injury or injuries, more or less severe. Restless sleep or loss of sleep follows and in a day or so pains in the head, back and limbs, the back pains being the most prominent, mental depression and great solicitation as to physical condition, incapability of normal application to work or business. Irritability, trivial symptoms magnified into apprehension of disease of the most grave character, and many conplaints of indefinite character, soon succeed to the primary symptoms.

As time passes and neurasthenia becomes plainly developed, the characteristic symptoms of that disease prevail. The patient is greatly depressed and gives way on the slightest cause to his emotions, tears or laughter being easily excitable, and one may follow the other without apparent cause. He shuns his friends and often even members of his family; he desires to be alone.

I have observed one symptom that is quite characteristic—mental exhaustion. The patient appears not to be able to concentrate or apply his intellectual faculties for any length of time. He quickly tires of any subject upon which he talks. If he reads he soon tires of the subject matter. He cannot become interested in games. Upon only one subject does his mind appear to act, and that is the introspection of his physical disabilities. Several weeks after the initial symptoms of the disease there may exist impairment of the senses, the muscles become weak, the patient loses flesh, his face is pale, anxious and careworn, he has dizzy attacks, ringing in the ears, a sensation as if the brain was too big for the cranium.

Nosomania, as a result of the accident, is of a vague, uncertain description—not active, really more of a querelous timidity than a

fear—it rarely is systematized in any form. He dreads any possibility that might subject him to any chance of a repetition of the accident. He is easily annoyed and worried by trivial things. Excitement of any kind, almost, causes the heart to palpitate. The speech may be affected, careless in talk and the words may be indistinct; he annunciates slowly.

I saw the case of a woman who suffered from traumatic hystero-neurasthenia in which the condition of hemi-anæsthesia was noted, and who presented a rather curious disturbance of speech. Her mental conception was apparently at fault. In attempting to talk she would, so to speak, jump at the sense of a sentence, announce the principle word and omit the most of the other words. But when requested to repeat the words, and her apperception was excited, she would repeat the sentence in an intelligible way, articulating in a normal manner.

Ugly dreams are present to further complicate the usual disturbed sleep. The motor symptoms are those which would naturally follow a general malnutrition of the nerves. True paralysis never occurs. Muscular power is present, but weakened. The gait is normal, but that of a feeble and exhausted person. Every movement fatigues. Coördination is normal, except where delicate or fine movements are necessary, and then tremor prevents perfect coördination; the eyelids, tongue, face and fingers are most involved. When the back muscles are involved the characteristic "lumbago attitude" is noted.

Headache is a most prominent symptom. It may affect any part of the head, and be of almost any description. It may take the form of a true neuralgia.

Hyperæsthesia is frequently noted. Anæsthesia may occur, particularly, or perhaps solely, in cases where the hysterical form is developed. Paræsthesia may also exist in this variety.

The special senses may be involved. Asthenopia—fatigue of the retina—with limitations of the responsive visual fields. The pupils are moderately dilated. Hypersensitiveness of hearing, and ringing and buzzing in the ears. Taste and smell may also be involved, especially in hysterical patients. Aberrations of tactile sensibility have already been referred to. The reflexes are increased, but equal bilaterally. The knee jerk is increased most notably. Ankle clonus is seldom noted; if it occurs it is slight. The upper extremity reflexes—biceps, triceps and supinator—are hyperactive. The superficial reflexes are

increased. Digestive disturbances are frequent. Gastric and enteric difficulties—coated tongue, foul breath, constipation, sometimes diarrhœa—are common.

The prognosis of traumatic neurasthenia is uncertain as to the time of its duration, but in cases not complicated its intrinsic tendency is to recovery.

The influence of diathesis in the prolongation and cure of the disease is very great. Lithemic people are favorite subjects for neurasthenia. Diseased or feeble persons have difficulty to get well. The influence of contributing causes to this disease has already been referred to. Absence of all mental excitement and skillful moral as as well as physical treatment will do much to make the prognosis favorable.

In this essay I have made no reference to the medico-legal aspect of traumatic neurasthenia. To enter into this question would require the elaboration of my paper to a degree that would consume too much time and patience. I may say however, in conclusion, that no disease known to medicine affords a more popular basis for a suit at law for damages to the person.

The absence of objective symptoms—that is, symptoms which are appreciable to one or more of the special senses—make malingery an easy matter.

The symtomatology is virtually subjective and the testimony of the patient—if it is believed—must determine the extent of disability. The influence of long litigation on genuine neurasthenics is always bad. It keeps the mind in a chronic state of agitation. The law suit colors every idea of the brain and militates almost every action of the body. In a large experience of years in railway surgery I have never known a case of traumatic neurasthenia to recover before the law proceedings ended, and I have known many rapid recoveries after the award of substantial damages. The introduction of electricity as a motor power has greatly augmented opportunity for physical injury and traumatic nervous disorders. It has also instituted a modus vivendi for unscrupulous lawyers and disreputable malingerers. The fact that these means of locomotion occupy the public highways and streets—which, by right of eminent domain, belong to the people—make them the prey to a class of people devoid of conscience who, well aware of the ignorance, prejudice and bias of the average juryman, rascality of lawyers and complacency of courts, make it a business, by

false pretense of injury with resulting spurious disability to defraud. Unfortunately, too, we have medical men who, either through a limited knowledge of their art or natural moral depravity, assist the malingerers and lawyers in their nefarious designs.

DISCUSSION.

Dr. J. Leonard Corning: "I think that all who have devoted much time to the study of spinal neurasthenia must recognize the exceeding lucidity and practical tone of the paper just presented. I have rarely heard so much of a subject naturally so illusive and difficult of handling placed before a body in such a concrete and easily understood form as in this paper. The fundamental nature of this disease has been reasonably well established, although there will always be a number of missing links. As its fundamental basis, like that of epilepsy, is totally unknown, so we can only arrive at an understanding of it by logical induction; hence, it is evident how difficult the subject must be to treat.

"Dr. McGill has made a number of points in his paper to which I think we can all assent. I notice that he divides the neuroses into functional and organic. That, considering the etymology of the word, is perfectly legitimate. Our use of the word 'neurosis' is a most arbitrary and special use of the term, and the sooner it is gotten rid of perhaps the better. The author's careful differentiation and recognition of a psychical and a physical effect of shock is exceedingly good. Of course, those of us who have not had a wide experience in dealing with these railroad cases, and have not seen the malingerer come forward with a beautiful story of injuries received in this way, sometimes primed and coached by others, will not appreciate this so much. Again, they will not appreciate so much, unless brought face to face with a person exhibiting this disorder, although presenting no evidence of physical injury. These people get well in a comparatively short time. I was almost going to say that these people who have received 'a hysterical injury' are liable to get well readily and quickly unless a law suit is brought. But there is another class of cases in which the symptoms are well developed, and in these we must assume that there is a true physical basis. This latter class may get well in one or two years. We recognize the genuineness of these cases."

Dr. William M. Leszynsky, of New York: "I thank you for the courtesy extended. It seems to me that Dr. McGill has presented

this subject in an unusually comprehensive manner, and has shown clearly that there are really such cases in existence as traumatic neurasthenia. The majority of general practitioners are inclined to believe that these cases are all simulated. That is very much like the common mistake of telling people that they are "simply nervous" and that they must expect to carry their nervousness with them all their lives. I know of a number of instances in which men in perfect health have developed all of the symptoms enumerated in the paper. I recall a case of a motorman on a cable car in New York City who, while in perfect health, met with a railroad accident by the collision of his car with another. Although he had not had any previous illness in his life he became thereafter an invalid, and exhibited a great variety of symptoms. He was well provided for by the railroad company, but it took him four years to recover. Many patients of this class will, for a long time after they have received substantial damages, continue to present the same symptoms Cases of traumatic neurasthenia and traumatic hysteria often blend together. I have now under my observation a patient who, while crossing a ferry, had a gang-plank drawn across her foot. Although there was no obvious injury she became an invalid, and has remained so for upwards of three years, and this, too, in the face of the fact that the company made a settlement. The prognosis is always uncertain, and cannot be said to depend upon the amount of damages or upon the case being thrown out of court. It requires a very thoroughly trained neurologist to determine whether these cases are simulated or genuine. Even such a person is sometimes mistaken in his judgment of these very difficult and puzzling cases. I have in mind a case in which a number of prominent neurologists expressed the opinion that a certain case was a genuine one, yet a day or two after the patient had received substantial damages that person was able to get up and ride a bicycle, although up to that time apparently paralyzed."

Dr. M. Lampson, of Jersey City: "I believe this paper to be a very timely one, as it is liable to be brought to the attention of any practicing physician at any moment. We cannot all be neurologists. To approach a proper discussion of this subject from a common sense standpoint it is necessary to possess the qualifications and ideas of both the neurologist and the surgeon; the plain, common-sense ideas of an everyday surgeon are certainly a very great aid to a man when called upon in court either to prevent an unjust action for damages or to uphold a

just claim. Dr. McGill has discussed this subject very ably, and has had the peculiar advantage of a long and extensive experience in railway surgery. His conclusions while perhaps not perfectly in line with those of the neurologists, I think are worthy of careful consideration. Personally, I have seen these cases only as a surgeon sees them. Every hospital surgeon is liable to be called upon to estimate the neurotic element in a given surgical case. The specialist seems to be sometimes inclined to refine matters a little too much. Like all specialists travelling in more or less of a rut, he is apt to draw conclusions which are somewhat strained. You are liable to be called into court as a witness as to the fact. The lawyer proceeds to treat you as a specialist, and it places you in a very bad light if you are not well posted on all of the theories."

Dr. Charles P. Noble, of Philadelphia: "I wish to thank you for your courtesy in asking me to participate in this discussion, and to express my pleasure at being here. I came here to present the greetings of your sister society, the Pennsylvania State Medical Society, and to say that it would give us great pleasure to have you reciprocate by sending a delegate from your society to our next annual meeting, which is to be held in Wilkesbarre in September, 1900."

Dr. McGill: "With regard to my insistence, in my essay, upon the existence of a neurotic diathesis for the production of neurasthenia, I wish to make an explanation. A person may inherit or acquire a neurotic diathesis, and it may never develop active nervous disorder until some cause excites it. In this way the trauma or shock becomes the electric spark which, so to speak, explodes the magazine. Then, again, many people are hurt without developing neurasthenia at all. If a strong healthy man should invariably develop neurasthenia after being hurt in an accident we would look upon it as a sequel in every case, but we do not find this to be the case, at least it has not been my experience. In the case of the motorman referred to by one of the speakers, there was a severe strain of the muscles of the back as the exciting cause for the production of neurasthenia in an underlying nervous diathesis. The experience of the surgeon will count for a good deal in the consideration and management of such cases. I have simply looked upon this matter, not as a neurologist, but in my capacity as a railway surgeon."

ESSAY.

BY NORTON L. WILSON, M.D., OF ELIZABETH, N. J.

ACUTE OTITIS MEDIA.

The subject of this paper is one which has received repeated consideration and formed a theme of frequent discussion.

An apology may be due to you because once again your attention is called to the subject, but it is one which has to do with one of the most important diseases of the ear. It is needless to assure you that if we are able to abort or cut short by treatment, these acute inflammations of the middle ear, we will have but few chronic cases with their many and serious complications to treat.

In presenting to you a subject seemingly threadbare, I do so because of the wide differences of opinion as to the proper method of its treatment. In such presentation I wish, in the first place, to impress upon the members of the profession that we are, in a large sense, educators of the people. Upon us rests the obligation of instructing the masses as to the proper care, not only of their bodies in general, but of their ears as forming a part of such bodies. We ought, therefore, so far as is possible, to agree in our notions of proper methods of treatment of the disease under consideration before we undertake to instruct the people in such methods. I may safely say that there is a general agreement in the profession as to the etiology of the disease, but there exists a difference of opinion in regard to the proper methods of treatment to be pursued.

I have purposely entitled this paper "Acute Inflammations of the Middle Ear." Such inflammations may be of a catarrhal or purulent nature, and under this head I include the serous variety. The catarrhal is more frequent than the purulent. The latter form of the disease more frequently occurs than it would otherwise if we properly treated the catarrhal cases. If the middle ear should be regarded as one of the accessory sinuses to the nose, which in our opinion it is, just as the antrum of Highmore or the frontal sinuses are so considered, we would, in my judgment, see the inportant relations existing be-

tween the nose and the ear. We all know that acute inflammation of the nasal chambers may or may not extend into these sinuses. It is equally well known that an extension of the process is much more likely to involve the middle ear than the other sinuses, although simple salpingitis may exist without further extension of the inflammatory process into the middle ear. The causes of acute catarrhal otitis media may be the extension of inflammatory products from the external ear, the introduction of fluids in the middle ear through the eustachian tube while bathing, or from the use of the nasal douche, acute coryza or violent efforts at clearing the nostril or any other abnormal condition of the upper air passages, particularly the presence of an enlargement of lymphoid tissue in the vault of the pharynx. Climatic influence must also be considered an etiological factor.

It has already been suggested that if the acute catarrhal inflammations were properly treated, there would be less purulent inflammations to treat. It is not our wish to have you understand that all the purulent inflammations result from neglected catarrhal inflammations. Some cases are purulent from the beginning, but not a few catarrhal inflammations are converted into purulent cases by infection, either through the eustachian tube or the external canal after rupture of the drum membrane has taken place. The term Acute Catarrhal Otitis Media is applied to an active inflammatory condition within the middle ear, resulting in an increase in the normal secretion. It is certain that venus stasis plays an important part in the causation, and in this condition the mucus membrane is particularly susceptible to the absorption of bacteria. Why, in certain instances, this inflammatory process results in the formation of mucus secretion and in others in the formation of pus, is explained by Dench. He says: "The upper part of the cavity contains a large amount of connective tissue. We should expect infection in this region to be followed by inflammation of the cellular type, while infection of the lower portion of the cavity would result in a simple catarrhal inflammation of the lining mucus membrane." If, therefore, the infection is slight and only occupies the lower part of the tympanum, a catarrhal inflammation is the result. If, on the other hand, the infection extends to the upper part of the middle ear, a supurative process ensues. This is always the case in infection from the exanthemata, typhus and typhoid fevers, pneumonia, diptheria, influenza and operations in the nasal and post-nasal spaces. It has

been rather our purpose to call your attention to these varieties of inflammation than to point out the necessity for diagnosing them. The subject under discussion was suggested by a recent case coming under our observation. The parents of a child two years of age, after two or three restless, feverish and wakeful nights, called upon a physician, fearing that the child had sore throat; they had noticed that it occasionally put its hand to its throat. The child's throat was examined and found not to be inflamed. The fever could not be accounted for. A homeopathic physician was called in and he too failed to satisfy the parents. The child's condition continued about ten days, when the mother discovered, one morning, a purulent discharge from the ear. This solved the mystery and the child was brought to my office for treatment. It was undoubtedly in the beginning a catarrhal otitis media; it became purulent and could no doubt have been averted if treated earlier. I cite this case to show you how easy it is to overlook an earache in young children. It behooves us, therefore, to examine the nose, throat and ear in all cases of fever where the cause is not clear.

The symptoms of acute inflammation of the middle ear are so well known as to require no extended explanation. I wish to say, however, that they vary considerably, according to the age of the patient. There has come under my observation a case of otitis media cataralis acuta in the adult, so severe as to rupture the membrana tympani and yet the patient positively declared he had had no pain. Cases of this character are rare, except they be due to tuberculosis. Children are more apt to have an elevation of temperature than are adults. The part of this subject which most concerns the general practitioner is the diagnosis and treatment. If the canal and membrana tympani are inspected in the early stages with a speculum and mirror, there will be found a distinct hyperæmic condition of the drum membrane most marked in the region of the handle of the malleus, with the redness shading off gradually into the normal color of the part. If the inflammatory process does not subside, the whole drum membrane, including the upper part known as Sharpnell's membrane, will present a deep red color. The lustre is wanting and the landmarks may be obscure on account of oedema. At this period effusion has usually taken place, the result being to force the drum membrane outward into the canal. As has already been stated this simple catarrhal inflammation may be converted by infection into a purulent process,

with its accompaning necrosis. Recognition of this condition in its early stages is of the utmost importance, since the disease is always a serious one, being dangerous not only to the function of the organ but often to life itself. Particular attention should be given to an inspection of those parts lying above the short process of the malleus, whenever severe pain in the ear is complained of. In the very early stages of the purulent variety, the upper portion of the membrana tympani alone is the only part which presents the slightest departure from the normal appearance. Inspection will reveal the fact that this portion of the membrane is distinctly congested, presenting a deep dull red color, characteristic of a high degree of venus engorgement of the underlying structure. This hyperæmia does not extend below the posterior fold.

It will be observed that there is a marked difference in the appearance during the early stages between the catarrhal and purulent inflammations of the middle ear. It is in these early stages that the family doctor sees the case and it is important that prompt measures should be taken to abort the attack. Opinions widely differ as to the proper treatment of this disease, and for that reason I have presumed to present the subject for your consideration, and give my own experience, rather than quote the many good authorities on this subject. In my own practice I put the patient to bed, administer calomel in small doses from one-sixth to one-half grain every half hour, until copious evacuations of the bowels are obtained. At the same time I have applied two or three leeches in front of the tragus, and in order to relieve the pain have irrigated the ear with hot water by means of a fountain syringe, with a return flow bulb attached to the end of the tubing fitting snugly into the meatus, and allowing the stream of hot water to gently run up against the membranum tympani and to flow out through the outlet without removing the tip. This method of treatment does not commend itself to many of the profession, who insist that moist heat is objectionable, inasmuch as it has a tendency to favor venus congestion, soften the tissues and hasten local necrosis, and does not aid the abortion of the process, which is the object of treatment. This method of treatment was discussed by the writer in a paper read before the Union County District Medical Society, in April, 1895, and since then in the many cases treated by him he has seldom failed to promptly relieve pain. His experience leads him to believe that it does not favor venus congestion, but on the contrary, dilates the vessels and relieves the stasis.

On a very recent occasion two children came to the writer with earache and during their treatment were under his constant observation. Calomel was administered and heat applied to the drumhead in the manner above described. In a very short time they had fallen into a peaceful slumber. On the following day I was called to see the child of a professional brother and the same expedient was resorted to with the same happy result. They cannot fail to be emphatic who have witnessed one of these little sufferers one moment piteously crying and appealing to our deepest sympathies, and the next experiencing a grateful relief from the use of the hot water, soon to be followed by a peaceful and painless sleep.

The treatment which we have indicated is applicable to both the catarrhal and purulent forms of acute otitis media.

Physicians are educators. As such it is their duty to instruct the family what to do and what not to do. I sometimes feel that we have been negligent in our duty when I see an ear gummed up with goose grease, mullen oil, sweet oil, etc., etc., and repeated efforts are made necessary to clean the canal in order to inspect the drumhead. A resort to these improper methods of treatment is a popular one, but they have no theraputic value and so besmear the membranum tympani as to render its recognition difficult. No objection can be urged against the use of vapor of chloroform, solutions of carbolic acid, morphine, atropine or cocain, but in my practice I have been able to dispense with the use of drops of any kind since using the continuous stream of hot water. The treatment of continuous hot irrigations has been mentioned at some length, because it is in direct opposition to the teaching of many excellent otologists, and because in my own experience I have found that it affords relief from pain more promptly than any other expedient. In resorting to this method of treatment I never neglect the toilet of the nose, using Dobell's solution or some of the so-called antiseptic solutions as a mild spray or washing out the nostril by dropping this solution from a medicine dropper. Older persons will readily sniff it through the nostril from the palm of the hand. The douche is never used where large quantities of fluid are forced into the nasal chamber, for fear of its entrance into the eustachian tube. If the nasal mucus membrane is much swollen, with closure of the eustachian tube, I drop into the nose a watery solution of suprarenal gland. After washing off the mucus membrane a very soothing application is a spray of menthol and camphor

dissolved in some of the coal tar oils. I consider this step in the treatment of acute otitis media just as essential as any of the others. As to the internal treatment, I have already spoken of calomel, because I believe that to be of considerable value. I may add that I sometimes give aconite, acetanilide or phenacetin, but am loath to administer opiates especially until after the bowels have been freely evacuated. This is the conservative treatment of acute inflammations of the middle ear, whether they be of a catarrhal or purulent nature, and this treatment is preferred until positive indications for paracentesis of the drum membrane present themselves.

It might be added that in some instances children are Politzerized by using warm air where no secretion in the nose is observed and the eustachian tube is closed. Some otologists, for whom the greatest respect is entertained, advise early incision of the membrana tympani, and yet by the conservative method outlined above, rupture of the drum membrane has been averted. It must be admitted that every case will not yield to this treatment, but we should give the patient the benefit of our experience before operation, unless by so doing we endanger his life. The majority of general surgeons try rest and ice in catarrhal appendicitis before using the knife, and we all know with good results. The treatment indicated, if necessary, is continued from twenty-four to thirty-six hours. If, at the end of that time the membrane is bulging or the pain persistent, I do not hesitate to incise the membrana tympani. Before doing this I attempt to anæsthetize the drum membrane by using a warm six per cent. solution of cocain hydrochlorate. In some cases this solution relieves pain, while in others it fails. This is probably due to the fact that in some cases the epithelium has been cast off, while in the cases where it fails to relieve, the epithelium is intact, I then attempt to sterilize the canal by filling it with a warm solution of mercuric bichloride (one to three thousand). If the membrane is bulging in the upper part or if the otitis accompanies one of the exanthemata, we may confidently expect to find pus. For incising the membrane a cataract knife is used and is found to be more useful than the ordinary spear-shaped blade made for the purpose. After gently pushing the knife through the portion of the membrane which is bulging, an effort is made to divide the swollen tissue in the superior-posterior portion of the middle ear. This causes free bleeding and the hemorrhage is encouraged by irrigation with warm sterilized water, if the discharge is purulent. If the

discharge is of a serous character, I omit larcerating the membrane within the middle ear and do not irrigate it, but mop it out with cotton applied on a probe. In other words, the probability of converting a serous discharge into one of a purulent character is avoided as much as possible. The catarrhal discharge is daily mopped out until it diminishes, when the membrane is gently dusted with boracic acid by carefully blowing in the powder. These cases, as a rule, terminate satisfactorily within a week, while those of purulent discharge are irrigated four or five times a day with boiled water, to which may be added a little table salt or a mild solution (one to five thousand) of mercuric bichloride or a solution of boracic acid. As a rule, cases of the latter kind will terminate satisfactorily in about two or three weeks.

In conclusion, I would fix in your minds that acute otitis media, whether it be of a catarrhal or purulent nature, is not a trifling disease, and the surgeon who fails to properly appreciate this fact falls short of his professional calling.

DISCUSSION.

Dr. T. C. Ard, of Plainfield.: "I would indorse the attitude taken by the reader of this paper. This is certainly one of the most important diseases which the practitioner is called upon to treat, and yet this does not seem to be the general opinion. However, with the multiplication of cases of cerebral and epidural abscess and of sinus thrombosis it may perhaps become so. The use of cocain prior to puncture of the drum membrane seems to me of decided benefit, but I prefer using a ten or fifteen per cent. solution, and allow it to remain in the canal for about ten minutes before making the incision. I have heard it frequently stated that it is of no special value, but I am sure that it has been in my practice. The use of the hot water is certainly of value, and I think it is much more generally considered so than would seem from the statement made in the paper. I believe in using it just as hot as can be tolerated. I am very glad to see this device which has been presented to us for use in connection with this hot water irrigation. By the ordinary method there is apt to be traumatism and infection of the canal, with consequent otitis externa."

Dr. C. Kenneck: "These cases frequently come to us as general practitioners. I would like to refer to one point not yet touched upon,

and that is regarding the line of treatment. I have found that patients are very readily relieved by a solution of atropin (four grains to the ounce). Perhaps this may seem a very strong solution, but I have never yet met with a case which was not relieved after using this two or three times. About ten drops of this strong solution should be instilled into the ear, and the meatus closed with cotton. This should be repeated within an hour. The pain would usually be relieved in ten or fifteen minutes. This action may be difficult of explanation, yet in nearly every instance after twenty or thirty minutes the relief will be marked. I have great faith in mashing a baked potato in a stocking, and applying it to the ear."

Dr. D. H. Goodwillie: "I certainly indorse the paper thoroughly. The hot water irrigation and the medical treatment I have used for years, and know that it has given great satisfaction. However, I think these cases originate largely through nasal trouble. It is my practice to open up, as far as possible, the stenosis of the eustachian tube, and in doing this I use a saturated solution of borax and an equal quantity of peroxide of hydrogen. This washes out the mucus thoroughly without causing much pain. Then a small quantity of a ten per cent. solution of cocain shrinks up the turbinate tissue. I next make a small tuft of cotton on the end of a probe, and pass it into the anterior meatus. As the probe is resolved slightly it wipes out all the mucus from the fenestrae. The cocain can be applied in the same way, and in many cases it will give almost instantaneous relief."

Dr. Judson Daland: "I would like to call attention to certain cases of typhoid fever in which the temperature continues after the fever is pretty well passed off. I have noticed in a certain proportion of these cases that the elevation of temperature is to be ascribed to acute suppurative otitis media. In the nervous state in which these patients are, this otitis media is often not recognized. I have also observed a number of cases in connection with the same disease in which the delirium and the so-called "insanity" has been to the same cause. This being true it has been my practice in the last few years in all cases in which these two conditions were present to insist upon a very careful examination of the ears. I have not had an opportunity of observing very many of the acute exanthemata, but Dr. Green, of Boston, has made a very exhaustive study of them, and has found a similar state in very many of them."

Dr. Wilson: "I find that if a six per cent. solution of cocain will not anaesthetize the drum-head, a fifteen per cent. solution will not do this, and the reason is to be found in the fact that in such cases the epithelium is intact. In my experience the atropin has more often failed than given relief."

ESSAY.

BY LOUIS FAUGERES BISHOP, A.M. M.D., NEW YORK CITY.

The Diagnosis and Management and Treatment of Pleurisy With Effusion.

There is no condition more interesting than pleurisy with effusion, nor is there one that is capable, under certain conditions, of presenting greater obscurities of diagnosis or stronger reasons for the active intervention of the physician. The diagnosis of effusions into the pleural sack presents problems in physical exploration that are not always successfully solved by those who have not realized the possibility of error, even in cases that are apparently quite simple. In all chest diseases, fluid should be made the subject, at frequent intervals, of diagnosis by exclusion. This is particularly necessary in those pulmonary conditions which are liable to become complicated by effusion, either simple or purulent.

Fluid is only found in the pleural cavities as a result of some disorder of the body. It is never found in healthy individuals. The cause of fluid may be local diseases of the pleura themselves, or it may be the result of the conditions that produce dropsy in other parts of the body, The conspicuous causes of fluid in the pleural cavities are pleurisy and disease of the kidneys.

Cardiac disease does not usually cause effusion until the kidneys have been involved by congestion or inflammation. Fluid is more common in acute inflammation of the pleura than when that inflammation has become chronic. The physiology of the pleura is not different from the peritoneum in that it seems better able to take care of itself after repeated attacks of disease than when inflamed for the first time. The only condition included in this discussion is the non-purulent effusion. The importance of a serous effusion into one or both of the pleural cavities depends primarily upon its amount. A small effusion occurring in the course of kidney trouble does not influence the condition of the patient at all. A large effusion occurring, perhaps from a true inflammation of the pleura, may be apparently

well borne, but its mechanical removal is indicated, on account of the possibility of sudden death. When the quality of the fluid is altered and the pleura is converted into an abscess cavity the importance of removal becomes imperative. The diagnosis of fluid in the pleural cavity depends upon its physical characteristics as compared with those of the surrounding tissues. Fluid, when enclosed in an elastic capsule, forms a body that when percussed offers a certain resistance to the finger, that does not transmit sounds, and does not convey sounds from neighboring bodies.

Sound may be conducted along the chest wall from neighboring parts of the chest, or there may be adhesions producing conducting media, just as if there were a cross-piece in a bag of fluid. Thus it results, that while in a simple effusion that does not last long there may be found the classical signs of fluid in the pleura cavity, yet in many instances the signs are so complicated by the eccentric conduction of sound on account of the great irregularity of the sac containing the fluid, that a final conclusion is only reached by the use of an exploring needle. Strangely enough, though skill in diagnosis actually does improve in those who have particular opportunities and give special attention to physicaldiagnosis, it is found that these same practitioners suspect fluid in many instances where others do not, and insist most emphatically upon the necessity of the exploratory puncture to confirm its existence.

The physical diagnosis of pleuritic effusion must depend upon an accurate knowledge of the physics of the chest and an extended experience of diseased conditions. The classical signs are flatness on percussion, the absence of vocal fremitus and breath sounds. However, these signs may be very different in any but the simplest and most recent effusions. Of all the signs, flatness on percussion is the most constant.

The presence of fluid gives a stony resistance to the percussing finger that at once leads to a careful consideration of the other signs. The possibility of insidious accumulation of fluid in the chest should never be forgotten. When the fluid accumulates gradually, there is no lesion in the body so extensive that may give so few symptoms. Many patients, when asked to breathe, go through the motions of respiration without allowing very much air to enter or leave the chest. In some, this is the result of actual feebleness of respiration. Particularly is this true toward the base of the lungs. The diagnosis

is often half made when we have succeeded in hearing the breathing sounds at the base.

The physical signs of fluid in the pleural cavity are not therefore such as can be categorically stated. It is my experience that bronchial breathing, sometimes of a particular type, and sometimes not, is as often found as the absence of breath sounds. The percussion note is sometimes even tympanitic, and moreover all these signs may be simulated by a consolidated lung, a thickened pleura or simply by a lung that is not properly expanded, or is slightly œdematous. In the detection of the fluid the quality of the physical signs is of great importance. The breathing when not absent has a peculiarity of its own and the vocal fremitus disappears in rather a characteristic manner as the chest is examined from above downward. The habit of making. in all instances, a complete exploration of the chest, going systematically over healthy and diseased portions alike, gives the faculty of judging the relative importance of signs. When all is said there will be many cases that must remain obscure, and in these the exploratory puncture should certainly be made.

The advantages of the exploratory puncture are those of a certain diagnosis in any condition. The dangers are from infection, as in a case where I saw at an autopsy a suppurating sinus connecting with an abscess of the lung at the site of an exploratory puncture. Hemorrhage may occur when an artery or other important structure is injured. I have seen at an autopsy distinct evidences that the needle had abraided the surfaces of the heart. This produced no bad symptoms, but the possibilities were not pleasant. However, were the disadvantages greater, the advantages of the exploratory puncture would more than out-weigh them. The needle is entered at the most promising point. No anæsthetic is necessary, as the pain is but trifling, if the needle is introduced with a single steady thrust.

The treatment of pleurisy with effusion by drugs does not afford a brilliant example of success in therapeutics, though spontaneous recovery is frequent. It has generally been undertaken with a view to increasing the elimination of fluid from the body by diuretics and purgatives, and by counter-irritation of the chest.

It is doubtful whether these have much effect upon pleuritic effusions. The reason for the effusion is something more than an accumulation of fluid in a particular place because the circulation is overcharged with watery matters. There is a local reason whereby the

natural exudation of the pleuritic surface has been increased and the natural absorption diminished until the balance has been in favor of accumulation. The specific gravity of blood serum is maintained by so delicate a mechanism, whereby excretion follows the slightest excess and thirst the slightest need of water, that it has never seemed philosophical to me to expect to effect an effusion depending upon local inflammation by any possible amount of change in the circulating blood. Still, there is good authority for a dry diet and restricted fluids. The condition seems to me more like a tank on the bank of a river. The river is ready at any time to receive the water from the tank when it is released, and no amount of clearing of the channel of the river or increasing the volume of its flow will be of any advantage to the emptying of the tank. Or furthermore, if the tank is to be filled from the river the disproportion in amount of water involved is so great that, short of entirely drying up the river, the sufficiency of water to fill the tank would not be removed. So it would seem that beyond the indirect influence of the general hygenic improvement that comes from active elimination, pleuritic effusions are not materially affected thereby. Iron, in improving the quality of the blood, is of undoubted value.

The treatment of pleuritic effusion, aside from mechanical intervention, consists in putting the patient in the best possible condition for the absorption and elimination of the fluid. Every-day experience shows that dropsical effusions are much more rapidly disposed of when the body is at rest and when the diet is a simple one. Thus, how often have we seen patients brought to the hospital with swollen feet, more or less anasarca, hyperæmia, and a good deal of moisture in the lungs, who, in the course of a few days, by simple rest in bed and a milk diet, recover completely from any signs of exudation. It would seem that when the forces of the body are not exhausted in other directions they take to themselves the task of re-adjusting the hydrostatic relations of the tissues, so the first thing to insist upon with a patient with pleuritic effusion is absolute physical rest and a plain diet of moderate quantity. The next point of routine practice should be a proper supportive treatment to the action of the heart. The danger of heart failure in pleuritic effusions is not an imaginary bugbear. The cases that I have seen of sudden death with pleuritic effusions has impressed me with the fact that these deaths were due to some inhibatory force acting upon the heart. The close connection

of the pleura with the nervous system is something astonishing in particular instances.

There are a number of cases on record where temporary hemiplegia has followed repeatedly the washing out of an empyemic chest.

Passing from the medical treatment of fluid in the pleural cavities we cannot do better than discuss the general operation of parancentisis. In these days, aspiration has almost completely displaced the simple puncture used by the ancients. The advantages of aspiration over simple drainage are the smallness of the aperture, the almost certain prevention of the entrance of air into the pleural cavity, the power of withdrawing fluid even when under negative pressure and the ability to empty the pleural cavity even when the puncture is not at the most dependent portion of the sac. The latter point is an interesting one. In simple pleurisy it would be possible, with the instruments that I consider the best, to empty the chest, even should the puncture be made above the level of the fluid. This is easily demonstrated by simple physical experiment in which a collapsed bladder, representing the lung, is hung in a bottle connected with the outside air. Now, this bottle may be emptied through another tube near its top by aspiration, the bladder expanding to replace the water. These are the same conditions presented in the chest. The fluid may be aspirated from the top of the chest, the lungs expanding to take its place. The best aspirator is the Dieulafoy. I prefer it to all the smaller and less powerful instruments, which as everyone knows, are apt to fail at the critical moment.

This instrument was devised at a time when aspiration of the chest excited more interest and attention than it does now. Since that time poorer and feebler instruments have been introduced without causing the protest they would have raised at a time when aspiration was more under discussion. A small instrument exaggerates the importance of the slightest imperfection. When the vacuum cavity is small a few bubbles of air will make it relatively feeble, while with a large vacuum a little leakage is not important. There is, of necessity, a little air in the tubes and needles. For aspiration of clear fluid a small trochar and canula, so constructed that the trochar can be withdrawn without disturbing the connection or allowing the entrance of air, is best. For this purpose the trochar works through a packed collar and there is a side tube to the canula for attachment of the aspirator. I have always wondered why it is so difficult to purchase

these. I think the reason is that the instrument makers provide themselves with an assortment of sizes and the first physicians who come along as a purchaser gets the smallest and best. At any rate it is necessary to have these small instruments made. The trochar is about the size of a knitting-needle. It has an extra aperture near the end and is, of course, in perfect condition.

A great advantage of the efficient aspirator is that it can be used with a smaller needle than a feeble one. A good place to aspirate an effusion is about two inches below the angle of the scapula, but the exact spot is always best chosen by a careful auscultation and percussion at the time of the operation. It is a good plan to explore with a very fine needle before entering with a larger instrument.

Aspirating the chest is not the simple procedure that it seems when performed by skilled hands, and it is only accomplished smoothly and safely with satisfactory instruments and well-worked-out antiseptic details. I have had experience with nearly all kinds of instruments, and the percentage of cases in which the apparatus gave out in some detail at the critical moment was large. Not only was this true when the aspirator was old, but also in at least one instance, when the aspirator that a gentleman had just brought from Paris was new, but had lain for some time unused. Attention should be given to the arrangement of the patient. Anæsthesia is not generally necessary. It is frequently undesirable. The patient is supported in a semi-recumbent position by means of a bed rest, which is so placed that half of the chest extends over and can be reached from behind. The aspirator is placed on a small table beside the bed, and is managed by an assistant. Just previous to operation, the point of entrance is percussed and ascultated, to be sure that it is a spot promising fluid. This point is marked with a pencil, and the skin, which had previously been sterilized, is washed again with an antiseptic solution. Now the stethoscope is laid aside, and the hands of the operator are thoroughly cleansed. The trochar and canula are attached to the aspirator. The index finger of the left hand is used to feel for the intercostal space and then the trochar introduced with a decisive thrust. It is claimed by some operators that the introduction of the trochar is much facilitated by oiling it, but the well-known tendency of oil to carry infection has made this always seem to me undesirable. As soon as the trochar and canula are in place the connections with the exhausted cylinder of the aspirator are opened and the trochar is with-

drawn. This is the critical moment in the operation. If the fluid flows clearly and evenly, we have only to proceed to withdraw in a deliberate and cautious manner as much as is desirable. The causes that may bring about a failure of obtaining fluid when aspirating would well form a discussion by itself. The canula may become blocked, the chest wall may not have been penetrated, but the costal pleural pushed in front of the instrument. There may have been an adhesion just at the point of introduction, and the instrument may have entered the lung.

The danger most feared in aspirating is syncope. For that reason a patient should always be given a stimulant before the operation and during the operation the pulse should be carefully watched. At the slightest signs of syncope the operation should be suspended and the instrument withdrawn.

We have in the diagnosis and treatment of fluid in the pleural cavity a subject well worthy the attention of all practitioners. We find that this fluid occurs as the result of either general or local causes, that its importance depends upon its amount, how well the patient bears it, and whether or not it is purulent. We find that its diagnosis is founded upon physical examination, but it is frequently necessary to use the exploratory puncture to confirm its presence. The exploratory puncture is not attended by much danger, and is justifiable in nearly all doubtful cases. The best instrument for removing a large accumulation of fluid is the large-sized aspirator, the best instrument of puncture is the trochar and canula, so arranged that the trochar can be operated without the admission of air. The point of aspiration of the chest is a matter of choice. The precautions and dangers are those that are involved in any surgical operation, but are not to be made light of. Death during this procedure is rare, *but from its neglect, are frequent.*

ESSAY.

BY J. S. BAER, M.D., CAMDEN, N. J.

On The Treatment of Abortions.

When it is considered that a large percentage of the cases of chronic pelvic inflammation can be traced to a neglected or improperly treated abortion, the importance of a discussion of the subject of this paper will be conceded.

In the treatment of these cases the same surgical principle is involved that obtains in the treatment of lacerated wounds in any part of the body. No surgeon would for a moment think of leaving a mass of devitalized tissue in a wound to decompose and interfere with rapid healing, and endanger the patient's life by possible septic infection.

We will assume then that in abortions prior to the fourth month we have the same conditions to deal with as in a lacerated wound. Ever since beginning the practice of medicine I have adopted as a cardinal principle of action the axiom, that an empty uterus is a safe uterus, and only safe when it is empty. The treatment may be considered under three heads: That of threatened abortion, inevitable abortion, incomplete abortion.

By far the larger number of abortions are induced, and we are not called upon to treat them until the inevitable or incomplete stage has been reached. But there are cases where the patients desire offspring, and it is these cases we are called to see in the first stage. If a case is seen before too great a detachment of the placenta has taken place, as indicated by the amount of blood lost, the patient should immediately be placed in the recumbent posture, if necessary elevating the hips. Perfect quiet and rest, both mental and physical, must be insured.

The patient should not be permitted to rise for any purpose, the use of the bed-pan insisted upon. She should remain in bed until all immediate danger is past, and excitement and excessive physical effort must be avoided throughout the period of gestation. Opium in some form, preferably morphine hypodermically, should be used at once to insure quiet and control muscular contraction, and repeated as may

be necessary. The fluid extract of viburnum prunifolium has been of decided benefit, especially in cases where an atonic condition of the uterus exists.

The vaginal tampon should not be used in threatened abortion. In inevitable abortion the hemorrhage will be profuse, the os dilated and the membranes or fœtus presenting; the patient will be having or will have had chills, more or less severe, and fever rising perhaps as high as 105 degrees F., dropping to normal as soon as the uterus is emptied. This fever is largely nervous in origin. I have seen it drop to normal after a dose of valerian. At this stage I would urge the use of the vaginal tampon, properly applied, as it places the patient beyond any danger from hemorrhage.

There is also less danger of septic infection if the vagina is filled with antiseptic material. Again, it stimulates uterine contraction, and by retaining the blood within the uterus, favors a more perfect separation of the placenta and membranes, and assists the expulsion of the fœtal sac, often with the membrane unruptured.

Frequently upon removing the tampon the uterine contents will be found lying loose in the vagina or cervical canal, when they can be removed without difficulty. By the use of the tampon, too, more blood will be retained within the vessels.

The tampon is left in place for twenty-four hours with a feeling of perfect security as to danger from hemorrhage, but the patient should be informed that her pain will be greater for a while. If this does not bring about the desired result when the tampon is removed, it may be reapplied and another twenty-four hours supervene, when if the uterus is not emptied, it should be done at once by operative measures. It has been said that the tampon should be removed in from six to twelve hours, and allowing it to remain twenty-four hours may be open to criticism; but I have never seen any harm result, although it has been in place as long as thirty-six hours.

By incomplete abortion is meant the expulsion of the fœtus and retention of the whole or a part of the placenta or membranes. And by far the larger number of cases we are called upon to treat belong to this class. The treatment of these cases depends upon the condition they are in when first seen. If about the fourth month after the placenta is fully formed, and there is no fever, nor odor to the discharges, the tampon may be tried, and sometimes the uterine contents will be found loose in the vagina upon its removal.

Whenever there is any fever or fetor, no time should be lost, but the uterine cavity should be cleansed under full antiseptic precautions, followed by gauze packing. The method by which this is accomplished has a great deal to do with the good results that should follow this procedure.

It has been said that the finger is the best currette. In my opinion this is very far from a true statement, for the following reasons: The finger cannot be made as clean as an instrument. The educated hand at the end of a proper instrument can convey to the mind as clear an idea of the condition of the uterine cavity as can the finger. In the large majority of cases the finger cannot be made to enter the uterus and reach the fundus without a degree of force that is unjustifiable. The greatest degree of gentleness of manipulation should always obtain in all obstetrical or gynecological treatment.

The man who uses force enough to puncture the uterus is not a proper person to introduce anything within the uterine cavity. Previous to the time when the placenta has reached a size and degree of firmness at which the uterus can take hold of and expel it entire, the cavity should be curretted, because, before that time there will be left behind shreds of the secundines, which *may* be expelled by nature, but their retention leaves the cavity in practically the same condition as a lacerated wound, and subjects the woman to the danger of septic infection and possible death, or the suffering caused by chronic metritis, salpingitis, ovaritis or pelvic peritonitis.

Currettage is an operation that should not be undertaken with the idea that it is a simple one. The size and position of the uterus should be ascertained and fixed in the mind. If the walls are thin and relaxed or it is soft and boggy, it should be remembered, and the degree of force regulated accordingly. The best instrument, in my opinion, for cleansing the uterus is the instrument used for this purpose by Professor B. F. Baer, of Philadelphia.

This work should, in nearly every case, be done under anesthesia, because you have full control of the patient and are less liable to cause traumatism. The forceps are introduced guided by the finger and the blades separated, when any shreds or portions of the placenta present will drop between them and can be withdrawn. The forceps are then separated and one blade used as a currette, when the uterine cavity can be thoroughly cleared of all fragments. This is, of course, done under antiseptic precautions; the uterus is then irrigated and

packed lightly with iodoform gauze, as is also the vagina. Ergot should not be used until the uterus is emptied, as it locks up the uterus, places it in a condition of tetanic contraction, and renders the manual efforts much more difficult.

Afterwards ergot should be used, because it hastens involution and by its power of contracting the uterus closes the sinuses and to a certain extent the lymphatics, and lessens the danger of septic infection. Rest in bed for a period as long or longer than at full term is absolutely necessary. Antiseptic vaginal douches should also be used.

My experience justifies me in making the statement, that not a single case of abortion should result fatally if seen before infection has taken place, or has proceeded beyond the result of help, if treated according to the method outlined above.

DISCUSSION.

Dr. W. H. Ireland, of Camden: "I was very much interested in this excellent paper, but I must differ on one point, and that is, regarding the safety of leaving in a tampon for twenty-four hours. I have seen serious results from tamponing in more than one case. The author admits that the majority of cases are induced. How is this done? By introducing something into the womb, either a nozzle of a syringe, a lead pencil or a hair-pin usually. When such a foreign body is introduced, it also introduces septic matter, and the placenta is often partially detached. The exact character of the septic matter is not known, but knowing how rapidly the micro-organisms increase it does not seem safe to confine them in the uterus for many hours."

Dr. Baer: "I think the doctor is laboring under a misapprehension regarding the locking up of septic matter in the uterus. I distinctly stated that if the case were seen before septic infection had taken place, I would tampon and endeavor to have the uterus cleared in that manner. I also stated that if there were fever and fetor no time should be lost in cleansing the uterus. Of course, the uterus cannot, under such circumstances, be made thoroughly aseptic, but I have repeatedly cleared it of a foul-smelling mass so thoroughly that no longer could any odor be detected. I have then packed the cavity with antiseptic gauze. I suppose I have allowed the tampon to remain in the uterine cavity as many as one hundred times, and I have never seen the slightest harm from such practice—indeed, I think it is better than tamponing at intervals of six or eight hours, with the accompanying fresh traumatism."

ESSAY.

BY J. LEONARD CORNING, A.M., M.D., NEW YORK.

THE DIAGNOSIS OF INSANITY; ITS METHODOLOGY.

It is, I fear, undeniable, that the study of psychology, both normal and morbid, is regarded with misgiving, nay, even aversion, by a large proportion of the profession. This is partly due to the concrete habits of thought engendered by long study of those relatively exact disciplines that go to make up the average medical curriculum; but in part also to the ponderous and arbitrary style of exposition adopted by psychologists not a few—men in other respects blameless, not to say eminent. In deploring the lack of attention vouchsafed by the medical men of the United Kingdom to the study of insanity, Clauston observes: "When we consider that one in every three hundred of the population is a registered certified lunatic, the marvel is how our profession has hitherto got along so well with so little systematic teaching or clinical experience of mental disease. We must remember that for every person obviously insane there is probably another who has been threatened at some period of his life with its symptoms, or labors under more harmless and less obvious varieties of it. If this vast mass of brain disease is not worth study, let the general profession be freed from responsibility in regard to it; if this cannot be done, then in the name of all that is reasonable, let its study find a place in every medical curriculum, as urged by the Earl of Shaftsbury, the veteran head of the English Lunacy Commission for the past forty years, and by almost all the medical witnesses of repute who gave evidence before the Lunacy Law Committee of the House of Commons of 1877." And then, speaking of the evil inseparable from the indiscriminate issuance of lunacy commitments, as practiced under the present system: "As well might you ask a man to give a life-insurance certificate that a patient was free from heart disease who had never listened to a cardiac murmur."

And finally, deploring the danger of being sued for false imprison-

ment, to which every medical man exposes himself by signing a lunacy commitment, he observes: "Several members of our profession have thus been brought into most serious trouble, professionally and financially, and themselves to pecuniary ruin."

What is so trenchantly said of Great Britain may, without exaggeration, be applied to our own country. I cannot, however, take the view of Clauston and the Earl of Shaftsbury that pschiatry should be taught in all the medical schools; for surely this would be to add to the ultimate strain of a mentality already perilously near breaking. Then, over and above all else, there is the fact, quite undeniable I think, that the intellectual development of the average medical student at matriculation is not equal to grappling with abstract problems with the ardor and insight that come with later years. For him the concrete is all. Hence his enthusiasm for things surgical. With the coming up of post-graduate wisdom, and the responsibilities of practice, however, there arise both appreciation and opportunity; and now it is that a little well-directed study will help on amazingly.

It has also seemed to me that much might be done by the literary activities of just such societies as this,—societies which foster and conserve the best in old and new alike.

Constrained by such reflections I have ventured to think that I might serve, perhaps, the pleasure and intents of this Society by quickly indicating the principles to be observed in conducting a systematic survey of the mind of a person thought to be insane. An inquiry of this kind naturally falls into two divisions, (a) the mental, (b) the physical.

The first is of dominant importance; for does it not lie with us to determine first and foremost how the brain is fulfilling the psychical part of its function? And this, in the present state of knowledge, we are only able to do by a careful analysis of the metaphysical product —the mind itself.

To advance systematically in such an inquest, some sort of classification is obviously indispensable, let its claim to impecability be ever so slight. Now the one commonly invoked for the purpose is the old classification of metaphysical philosophy, an outgrowth in most respects of the experiences, observational and introspective, of common life. See how we proceed with ourselves or with each other. Two alternatives are presented to a man: He can turn to the right or he can turn to the left. He pauses, then turns to the right; he is quite

aware that he has turned to the right, but not only this, is also aware, —by inner contemplation, by letting his mind scan the course of its own process, by introspection, in short,—of the nature of the mental process which has led to his turning to the right. He knows that he has pronounced a judgment as to the advisability of turning to the right or left, that he has made a choice of conduct, as some would say.

So much for one's ability to know what is going on in one's own mind. And now for the minds of others. We are in a crowded drawing-room, or better far, at dinner. The talk goes to this and that; we mark the flow of the thought streams, and pretty certainly, though perhaps unconsciously, form conclusions as to the disparate nature of their sources. This one's perceptive powers are good; that man's memory is poor—he has misquoted a well-known saying by a well-known author; this woman has wit—the power of seeing the connection between the apparently unrelated. Thus, hastily, yet with an intuition marvelously true, we analyze the mental contents, and thus we form our judgments concerning the degree and the nature of intellectual endowments of our saner fellow-men. In this simple fashion was the metaphysical classification of mind evolved. Now the psychological survey of our supposedly insane patient—and this is the point of the argument—should be conducted along equally natural, though somewhat more systematic lines. What is the condition of his perceptions, attention or apperception, of his memory, his reasoning power, his feelings—either painful or pleasurable—and what his ability to plan, to choose, and to execute or will? These are the questions to which you should seek to give answer. Nor, —when the subject is willing or capable of answering questions—is the problem so difficult as may appear at first view.

Is he cognizant of his surroundings, or oblivious to them? Does he hearken attentively to what is said to him? Does the irrelevancy of his talk reflect the waywardness of his mind? Is he exalted or depressed in conduct or speech, or both? Is he chimerical in his decisions? Is he guilty of gross infringement of social usage? Does he evince keen awareness of the exigencies of common ethics without the ability remotely to act up to them? Is he the victim of false perceptions (hallucinations), of illusions (perverted perceptions), or of delusive opinions (specialized errors of judgment)? Are his delusions supported by attempts at argument, arbitrarily proclaimed? Is he cleanly in his habits? Is he taciturn, morose, maniacal, demented,

suicidal, homicidal? Is there inversion of the sexual instinct? Is sleep greatly deranged? Is there inordinate dreaming? Does he refuse food? These are samples of the questions to be answered, in order to gain a quick, yet by no means superficial insight into the mental condition of the subject. Would that the task were always so simple. Frankly, it is not always possible to go forward in this satisfactory fashion.

Sometimes the subject is absolutely taciturn, refusing even the favor of a nod; or he may be obstinate or very stupid. While these negative conditions when not in sequence of simulation, possess undoubted psychiatrical significance, they, from their very nature, preclude that more searching inquest of the subject's mind, which turns upon his ability to reveal his thought and feeling through the medium of language, spoken or written.

It is in just such cases as this that study of the expression of face and eyes is of service. Nay, in all cases of insanity, the play of the muscles, whether in mimicry or in the grosser bodily movements, should be carefully noted.

Again, there are certain conditions which are to be differentiated from insanity as conventionally understood. Drugging by narcotics, drunkenness, meningitis, cerebral syphilis, traumatisms of head, delirium tremens, hysteria, the delirium of fevers, sunstroke and the transient effect of moral shock, are such conditions.

Self-evidently, the physical examination is important, constituting as it does in many instances, an informing adjunct, if not a true complement to the psychological survey itself.

Moreover, in forming a definite opinion as to the insanity of the subject, it is of decided advantage to be able to compare his condition during his alleged insanity with his state of mind previous thereto, either as known or described to you.

National prejudices and immediate social surroundings are likewise always to be considered. In civilized countries acceptably to dine is considered a mark of correct breeding, while to seek to meet the exigencies of sexual desire in public would expose the perpetrator to arrest and an immediate inquiry as to his sanity. Yet, as Maudsley has somewhere observed, there are savages among whom the conventionalities are precisely the reverse. To them, gluttony is vulgarity, sensuality refinement. Consequently, they privately gormandize, but copulate in the open.

Finally, if through one's reading, one is able to bring the data afforded by the psychological inquest into juxtaposition with some practical scheme of classification, to establish the form of mental trouble—in a word, a further and considerable advance will have been made. For surely, this is axiomatic that to know the precise form of a disease, be it mental or physical, is to acquire new insight into its management and destiny. Nay, for the matter of that, such knowledge is often indispensable for medico-legal purposes, where the question of malingering is raised.

Time does not permit of following out the subject of diagnosis in detail and in all its collateral bearings. If, however, the author has succeeded in briefly indicating the principles to be followed in an ordinary inquisition into the mental condition of one suspected of being insane; and if, moreover, he has succeeded in dispelling to some extent, that dread of psychiatrical matters so rife among the profession, he will feel that these modest notes have not been set down in vain.

ESSAY.

BY JOHN C. MC COY, M.D., PATERSON, N. J.

EMBRYOTOMY AND TWO CÆSAREAN SECTIONS ON THE SAME PATIENT.

On the 10th of August, 1894. I was called to see Mrs. B., mulatto, age 18, then in her first pregnancy. The patient had been having rather severe pains for a considerable length of time, and from her history had evidently been in labor for about three days. Personal history, negative, barring the fact that, according to the patient's statement her mother was a very small woman, but as well as she could remember had experienced no trouble with her labors although she had born several children.

The patient had been married one year, and up to the time of her present illness had been in perfect health, having experienced no inconvenience from her pregnancy. As I now saw her for the first time she seemed fatigued from her prolonged labor and from the fact that she had taken little or no nourishment during the preceding seventy-two hours, as a result of which her pains were becoming less frequent and less severe in character, her pulse at this time being rather weak. The membranes had ruptured several hours prior to my visit and there was a slight bloody discharge from the vagina. Vomiting had been more or less persistent during the twelve hours preceding my call.

Physical examination showed the patient to be of slight build and short in stature, her height being 4 feet 8½ inches. Heart and lungs negative. Urine contained a trace of albumen. Inspection of the abdomen showed that during a pain the uterus rolled forward causing the organ to assume almost an antero-posterior direction.

Vaginal examination elicited: A small vaginal outlet, extremely broad pubic arch and the promontory of the sacrum readily felt with the examining finger, the examination giving one the impression of a pelvic canal contracted in all its diameters.

The cervix was flattened out and dilated to the size of a silver

dollar; the child's head presenting, as nearly as could be judged, in an occipito-anterior position.

The finger held in contact with the head during a pain, elicited the fact that the uterine contracture exerted absolutely no effect upon the progress of the labor.

Owing to the unsanitary condition of the patient's surroundings she was transferred to the private ward of the hospital and at one o'clock, A. M., an attempt was made to apply the Tarnier axis-traction forceps, under complete ether narcosis.

After several futile efforts to engage the head and it being found impossible to perform a version, the child being still visable, the head was perforated, crushed with the cephalotribe and the body delivered piece-meal, this part of the operation lasting one and a half hours.

Owing to the extremely small vaginal outlet and to the fact that to extract the fragments traction had to be exerted well backward, the perineum was completely torn, the tear extending two and a half inches into the rectum.

The placenta was adherent and it was necessary to remove it piece by piece. After the last portion of the placental tissue had been removed the cavity of the uterus was thoroughly curretted with a dull irrigating currette, this being followed with a thorough flushing of the cavity of the uterus with hot sterilized water.

Bleeding having largely subsided from the uterus, the upper portion of the vagina and rectum were packed with iodoform gauze and the tissues below cleansed with sterilized water.

The tear in the recto-vaginal septum was closed with interrupted sutures of fine silk. The separated ends of the sphincter-ani muscle brought together, by means of a deep silk worm gut suture, and finally, the perineum repaired. During the operation a stream of sterilized water was kept playing constantly upon the parts.

The recto-vaginal tear healed perfectly and the sutures were removed on the tenth day. The patient urinated twelve hours after the operation and recovery was uneventful, the patient going home at the end of the third week. Time occupied in delivering the child and repairing the damage done to the parts was about three hours.

FIRST CÆSAREAN SECTION.

On the 15th of June, 1895, I was again called to see the patient and found that labor had just started, she being then at full term. Vaginal examination showed the head wedged in about the same

position as at the preceding labor, and making no progress. With the experience of the preceding year fresh in mind, coupled with the fact that the parents expressed the desire that every effort be made to save the life of the child, Cæsarean section was advised, the only restriction placed by the family being that none of the organs should be removed at the time of the operation unless it was found absolutely necessary.

The patient was again removed to the private ward of the hospital and a careful external measurement of the pelvis taken, with the following results:

Distance between the anterior superior spines of the ilia, 7½ inches; distance between the crest of the ilia, 8¼ inches; sacro-pubic, 5 inches; width of pubic arch at articulation, 2¼ inches.

The pains not being severe or frequent and the fœtal heart-sounds good, the patient was given a half ounce of magnesium sulphate, which was followed in three hours by a high enema of water. The following morning another high enema was given, which caused a free evacuation of the bowels. The patient was then prepared in the customary manner for laparatomy.

Operation June 16th, at 10 A. M. Median incision extending three inches above the umbilicus. The uterus was lifted out of the abdominal wound, wrapped in hot, wet towels, and firmly held by an assistant. Two sutures of silk worm gut were then passed through the entire thickness of the abdominal wall above the uterus, which, when tied, closed the wound in the abdomen above the uterus, thus preventing any undue exposure of the peritoneal cavity. An elastic ligature was then placed about the cervical portion of the uterus and the uterus opened in the median line anteriorly, the incision extending close to the fundus of the uterus. There was but little bleeding from the uterine incision. As soon as the uterus was opened the membranes presented; these were ruptured and the amniotic fluid allowed to escape. The placenta was situated on the anterior surface of the uterus, at the juncture of its upper and middle thirds, and was directly under the line of incision; it was rapidly separated from the uterus by the hand and delivered. The feet of the child were then grasped and the child quickly delivered, an assistant gently kneading the uterus.

The uterus was then washed out thoroughly with hot sterilized water and its cavity swabbed with 1-40 carbolic solution. Just as

soon as the hot water came in contact with the uterus the organ contracted. In removing the child, which was a male weighing 8½ pounds, the uterine wall was slightly torn at its upper portion, the tear being at right angles to the incision.

The next step consisted in the closure of the uterine wound, which was accomplished by using interrupted sutures of fine silk placed at intervals of about one-fourth of an inch; these sutures entering at the edge of the peritoneal surface of the uterus and passing down to the endometrium, the peritoneal surface being approximated with interrupted sutures of cat-gut, and the abdominal wall closed with through-and-through sutures of silk worm gut.

Time occupied by the entire operation, one hour and ten minutes. The child was put to the breast at the end of twelve hours. The sutures in the abdominal wall were removed on the eighth day, the patient leaving the hospital on the twenty-first day, convalescence being no longer than after the embryotomy. At no time after the operation did the patient have a temperature over 99° F.

Six months later the mother consulted me for a slight discharge from the lower portion of the abdominal wound. The discharge resembled that commonly found in endrometitis, and upon farther examination I found that a probe could be readily passed through the abdominal fistula and entered the cavity of the uterus. The opinion formed at this time was abundantly confirmed when, seven months later, two months after weaning her child, the patient noticed a bloody discharge from the abdominal sinuses, which was coincident with that of her menstrual period.

This bloody discharge from the abdominal sinus appeared with each recurring menstrual period, the discharge from the sinus being of a brighter red than that which was discharged from the vagina. An interesting feature of this complication was the fact that the bloody discharge from the sinus usually made its appearance about a day earlier than the vaginal discharge. Operation for this was advised but declined.

SECOND CÆSAREAN SECTION.

On the 15th of April, 1898, the patient again called to see me, stating that she had missed her February and March periods; the discharge from the abdominal sinus had ceased with the disappearance of the menstrual periods. From this time on until the full term,

the case was examined frequently and it was decided to resort to operation either prior to the onset of labor, or at its first appearance.

On November 12th, being one week over the time allowed for the full term of pregnancy, and there still being no signs of labor, operation was decided upon, the family leaving to my judgment the character and extent of the operation. The patient was once more removed to the private ward of the hospital and, after the usual preparations, the abdominal incision was made just to the right of the old cicatrix, when the following rather interesting conditions were found:

First.—At the point of the sinus in the abdominal wall the uterus was intimately adherent to the wall of the abdomen, over a space of 2½ inches.

Second.—On either side of the old scar in the anterior wall of the uterus were bands of adhesions extending along the entire length of the organ and across its cervical portion, the adhesions thus formed completely surrounded the field of operation—save at the fundus of the uterus, where they were deficient—uniting, as they did, the anterior surface of the uterus to the parietal peritoneum, they made the operative field practically extra-peritoneal.

Third.—The cicatricial tissue about the sinus in the uterus extended over an area an inch and a half in diameter.

Under these conditions the uterus was not drawn out through the abdominal wound, as was done in the preceding operation, neither was an elastic ligature placed about the cervical portion of the organ. The incision in the uterus was made along the line of the old wound, no trace of the silk sutures introduced at the time of the previous operation being observed. It was noticed that there was slightly more bleeding from the uterine incision than occurred when the elastic ligature was used.

The membranes were ruptured and the placenta found to be attached at about the same point as before, perhaps a trifle lower, and was delivered as at the preceding operation. The child, a female weighing 7¾ pounds, was then grasped by the feet and quickly delivered. Thus far the operation was practically extra-peritoneal, owing to the adhesions along the sides of the uterus, supplemented by gauze packing above, where the adhesions were deficient.

At the point of the fistulous tract in the uterine wall, the cicatrical tissue was excised and the opening of the uterus closed; the closure

differing from that in the previous operation, in that the interrupted sutures of fine silk entered on the peritoneal surface of the uterus, a short distance from the edge of the incision, and were placed a trifle more closely together, the superficial suture of cat-gut being omitted. Both tubes and ovaries were then removed; a wedge-shape of uterine tissue being included in the uterine end of each tube. The base of this triangular space was then closed with deep sutures of cat-gut, the only suture material used in the removal of the tubes being cat-gut.

The cicatrical tissue in the abdominal wall was next excised and the wound closed with tier sutures; the muscles being approximated with three mattress sutures of silver wire, and the closure of the wound completed with a subcuticular suture of cat-gut. The time from the abdominal incision to the delivery of the child was nine minutes, and the operations were completed in one hour. Recovery was uneventful, the mother and child going home at the end of the fourth week.

In the house to which the patient went there developed a case of diphtheria. The mother and child contracted the disease, the child succumbing to the malady, while the mother, after a rather tedious convalescence, recovered and is today, with the child delivered at the first Cæsarean section, in perfect health.

The question might be raised in this case as to the relative value of symphysiotomy and the more serious operation of Cæsarean section; or whether embryotomy might have again been performed. With symphysiotomy I have had no personal experience and yet I am inclined to believe that the mere separation of the pubes would not have allowed the passage of the child.

The external measurements of the pelvis in this case were no less than one would expect to find in a person the stature and build of this patient, and yet the conjugate vera, was, owing to the extremely wide pubic arch and the unusually marked sacral-prominence, contracted. This fact, coupled with the difficulty in removing the child, even piece-meal, at the first labor and the fact that the parents desired a living child, seemed to justify the course pursued.

While the external measurements of the pelvis may prove of great value to us in determining beforehand the probabilities of a severe or easy labor, yet, at the same time, we must take into consideration the size of the child, which can but be approximately determined; conse-

quently, any rules laid down as indications for the operation can be but relative and we are left to determine in each case whether the pelvic canal is of sufficient size to admit of the passage of the child.

Given a case which has been subjected to the operation of embryotomy, as was this case, with the extreme difficulty experienced in removing the mascerated child, I am inclined to believe that the Sanger Cæsarean operation, performed in a healthy woman before her resisting powers have been lowered by a prolonged labor, is under favorable surgical conditions, fraught with well-nigh, if not quite, as little danger to the mother as the so-called more conservative procedure of embryotomy.

In my own case the woman was about and attending to her customary duties nearly as soon as she would have been after a normal labor. When I compare the severe ordeal to which the patient was subjected at the first operation with either of the subsequent operations, the latter was far less severe, and in both instances the patient was left in better condition than she was after the embryotomy.

The Porro operation was not resorted to, because in this case, the uterus being in a healthy condition, as were also the appendages, the removal of the uterus must, of necessity, add to the dangers of a Cæsarean section, and unless there be distinct and definite reasons, such as morbid growths in the uterus or a septic condition of the organ or appendages, it would seem to me that we can best conserve the after-welfare of the patient by not removing the organ.

In my own case, I regret that in place of the double salpingo-oorphorectomy, I did not follow the course pursued by Crimail, of Pontoise, in which, during the second Cæsarean section upon the same patient, in order to provide against subsequent pregnancies, he passed a double ligature about the uterine end of each tube and divided the tube between the ligatures. Such a course, by allowing the ovaries to remain, would tend to relieve the patient of the various nervous phenomena incident to the artificially produced menopause.

Too much stress cannot be laid upon the careful and methodical closure of the uterus. While time is an important factor, yet I am inclined to believe that in my first Cæsarean, the fistulous tract might have been due to the fact that the sutures were not placed quite closely enough together. In the subsequent operation the sutures were placed at shorter intervals and no superficial sutures of cat-gut used.

DISCUSSION.

Dr. Stillwell: "In this connection I would like to relate a case which came to me last March. The patient was a girl only three feet, ten and a half inches in height. She was pregnant about three months. I referred her to Dr. E. B. Cragin, of the Sloane Maternity Hospital, New York. The internal conjugate diameter was 1¾ inches. Dr. Cragin performed Cæsarean section on her on December 5, and at that time removed the uterus and tubes, on account of the small diameter of the pelvis and the inability under such circumstances to properly drain through the uterus. The child weighed four pounds nine ounces, and is at present alive and well. The operation occupied three-quarters of an hour."

Dr. P. A. Harris: "I have listened to this paper with a great deal of interest. As we know, in the natural order of things, such a report cannot be expected very often, still there may be excuse for it. I believe that when a young girl of tender years (fifteen or sixteen years) has completed the second stage of labor, the membranes have broken and the cervix is entirely dilated, and the head cannot be made to engage, it does not matter whether the pelvis is 2¼ or 3½ inches; we are brought face to face with the old question of "the passage and the passenger." If the passenger is too large for the passage, and the child is living, with our present knowledge of the principles and our experience with Cæsarean section, it is our duty, perhaps, to perform this operation. However, four years later, the pelvis may have so changed that Cæsarean section may not be required. We must test this matter during the progress of labor. In such a case we should leave the ovaries and the uterus. In the case of Dr. McCoy the indication was absent. The pelvis only measured, as I make it out, 2¼ inches—5½ ctm.—which is far below what is called "the absolute indication." Most operators would perform the same operation in such a case, whether the patient were fifteen or nineteen years, the child being alive. Having delivered the child in that way, the question arises as to whether the woman should be unsexed. I happen to know, by hearsay, that in the case under discussion the proposition to unsex the patient was absolutely refused before the first operation. If the question were not submitted to the woman, at her age and with such a pelvis, one would be confronted with a nice ethical question. This point, as to whether the operator should or should not remove

the uterus and ovaries, and so render the second operation of this kind impossible, is a very nice point to settle."

Dr. Charles P. Noble: "I have been concerned in two cases in which Cæsarean section was performed a second time on the same patient—in fact, I believe the first successful Cæsarean section in the United States was done twice on the same patient by the late Dr. Gibson, of Philadelphia. There had been two or three embryotomies, and finally two Cæsarean sections were done. The patient lived to be an old lady of seventy odd years. The second patient who recovered in Philadelphia also had two Cæsarean sections performed upon her, the first one being done by Dr. Kelley and the second one by myself. In the second case I performed the first Cæsarean section. My opinion is not entirely in accord with the sentiments expressed by the reader of the paper, and Dr. Harris. Personally, I do not see why a woman should be denied the privileges of maternity because she cannot have a baby in the natural way. If there is anything well settled it is that Cæsarean section, if done under favorable circumstances by a competent operator, is exceedingly safe, the mortality being no more than two or three per cent. Of course I am not referring to the operation done in an emergency, and certainly if the woman elected to prevent further conception I would be willing to operate in that way. The simplest way of doing this, and it seems to me the best, is by removing the fallopian tubes only.

"I should not personally elect the Porro operation unless there were a tumor present, or there was infection, or the labor had lasted so long that there was good reason for believing that infection would occur; in other words, I do not look upon the Porro operation, but the Sanger operation, as the one of election. I think it will be found that the second, third and fourth Cæsarean sections on the same patient have no higher mortality than the first one. In the case operated upon by Dr. Kelly the first baby was delivered by crushing its head; the second baby was very small and was delivered spontaneously; the third labor was a Cæsarean section; the fourth labor was also a Cæsarean section; in the next labor she was delivered by symphysiotomy, and then she developed pus tubes, and I removed her appendages."

ESSAY.

BY A. W. TAYLOR, M.D., BEVERLY, N. J.

CIRCUMCISION; ITS MORAL AND PHYSICAL NECESSITIES AND ADVANTAGES.

No surgical operation of the present day can boast of so ancient a recorded history as the simple one of circumcision. It antedates the Israelitish migration and was a matter of history when Lot fled from Sodom and his wife became a pillar of salt. It is actually 3797 years old. The first subject operated upon was a young man of ninety-nine years and the next his son of thirteen; after which, the fashion having been set, all the males of the neighborhood vied with one another in their haste to follow the example of the patriarch and his son, thus showing a different spirit from that of the foxes in the fable of Æsop, when one of their number had accidentally been curtailed.

The operation was first performed by divine decree and was both a sacrament and a pledge.

History gives no light as to instruments used nor methods employed; neither is there any record of percentage of failures or successes, but as there is no report of a death upon the operating table, it is presumed that the operation was universally successful; although the same modesty which prevents us of the present day from recording our failures may have existed then.

From that time to the present the operation has been performed upon all kinds and conditions of men, savage and civilized; and with the usual generosity of the male sex when they find a good thing, it has been shared with or performed upon the "female brethren," as in many savage or semi-civilized nations or tribes the clitoris or labia have been abbreviated.

As no better physiological rules have ever been formulated than many which are found in that great and most ancient history, the Bible, it is but fair to presume that, aside from any religious foundation, this operation had its origin in sound physiological reason; and if universally adopted and faithfully adhered to would be of more

benefit to the human race than was the Mosaic Menu, as set forth in Leviticus, to the wandering Israelites.

Why the prepuce was given to man in its elongated and oft-times constricted form is easier to answer than why the appendix vermiformis was made part of the human economy.

The early origin and the universal distribution of circumcision having been stated, the "why" of it would naturally next arise. Originally a compact between God and man, it was undoubtedly as a matter of cleanliness and prevention of disease that it was instituted.

In the early days when the first commandment, viz: "Increase and multiply and replenish the earth," was more faithfully obeyed than those forming the decalogue have been since, there was undoubtedly a great deal of promiscuous sexual intercourse, and we have no reason to believe that it would not then, as now, quite readily result in sexual disease.

Such being the case, the elongated prepuce, constricted or not, would be a positive retainer of disease germs; and one can see how readily, in the journey from Egypt to Canaan, there might dire disaster result.

It is impossible in a brief space to more than hint at the wide *diffusion* of this procedure from the time of Abraham to the present day. Suffice it to say that in lands most remote and on the islands of the great ocean the operation of circumcision has been found to exist, and it alone, of all surgical operations, can trace its history back nearly forty centuries.

At the present day the Jews still observe it as a religious rite, and in at least one of our large cities near the Atlantic coast they have perpetuated its religious significance by erecting a tower, to one of their houses of worship, in the shape of the circumcised male generative organ; an architectural display with which, it is said, the civil law would not interfere.

As physicians, it is with its moral and physical bearing that we deal. The extent of the constriction or of the elongation of the prepuce may modify its effect upon the system; the elongation may be excessive and the constriction may even amount to a closure of the preputial orifice.

The ill results of this condition depend upon the irritation caused by the confined secretion of the glands back of the corona (the glands of Tyson) and upon the adhesion of the preputial mucus membrane to

the glands; a third condition may also exist, viz: A completely closed orifice preventing the flow of the urine and causing a ballooning of the prepuce; or a less complete closure may cause a retention of a portion of the urine and a deposit of urinary salts, which may eventually result in concretions or preputial calculis.

These conditions all tend to produce trouble by the same route, viz: The setting up of an inflammatory irritation of the prepuce or glans, or both, and the results due to it. Such a state of affairs is more likely to exist in infancy than in adult life, for as the boy grows in stature and physical function the penis grows in length faster than does the prepuce or the general cuticular covering of the organ, thus comparatively shortening the prepuce, and this together with the frequent nocturnal congestion breaks up the feebler of the adhesions so that not all cases of congenital or inflammatory adhesion are continued to adult life.

It does, however, contribute much to the comfort of the individual, both during infancy and adolesence, if the elongated prepuce is removed and the constriction with it.

The necessity of circumcision is thus shown (among other causes) to arise from the inability to freely urinate; from inflammation due to confined secretions and retained urine or some of the urinary salts, and to the reflex irritation produced by the phimosis.

It is not necessary that the constriction be either close nor complete nor that the prepuce be abnormally long to produce intense nervous symptoms of a convulsive or paralytic character; these symptoms can be caused by inflammatory adhesion when the foreskin is neither long nor its orifice constricted.

The penis being freely supplied with lymphatics, blood-vessels and nerves makes it exceedingly sensitive to mental or local irritation and also, the position or condition being reversed, makes it very easily a point from which irritative effects may quickly attack the nervous system and in other ways quickly disturb the harmony of the whole; through the pudic nerve this part quickly communicates with the spinal cord and the muscles about the hip.

The discomforts, disadvantages and distress that may arise from phimosis can be no more clearly shown than by quoting from White and Martin's work on "Genito Urinary and Venereal Disease," in which thay say: "The complications of phimosis are balanitis, balanoposthitis, adhesions, venereal warts, fissures, sub-preputial calculi, re-

taineds ecretions, irritability of the bladder, hemorrhoids, herniæ, and dilitation of the bladder, of the ureters, and kidney pelves, retention or incontinence of urine, arrested development of penis, premature sexual excitement, seminal weakness, spastic palsies, simulated hip-joint disease, muscular incoördination convulsions." To this list might also be added masturbation and at times some forms of mental disorder.

Surely a most formidable list. Sufficient almost to make us resolve that in order to avoid all such possible evils we will do as did the first man circumcised, of whom history says, Genesis, 17:26-27: "In the self-same day was Abraham circumcised and Ishmael his son, and all the men of his house born in the house and bought with the money of the stranger, were circumcised with him."

Domestic infelicity is, I believe, often caused by an existing, and not understood, phimosis interfering with the proper performance of the marital functions. A case of this kind has come under my observation, and I believe an examination and circumcision of the husband would often do more toward producing domestic harmony than the disgusting and prolonged divorce suits which drag their slimy length through our courts.

I further believe that such an examination, and if need be, operation, should be made in the case of a candidate for matrimony. This belief I have already put into practice, thereby promoting domestic bliss where otherwise discord would have ruled.

The reflexes, which we find not only among babes and youths, but men as well, are so many and varied that in all obscure cases of this character we should examine the glans penis and its coverings for a possible active or contributing cause.

It is said that a lady of Brooklyn, sad-hearted, anæmic in body and distressed in mind, once visited the renowned Dr. Talmage to seek from him advice as to what she should do to be saved. The Rev. Doctor patiently and sympathetically listened to her statements and then kindly advised her to consult a physician, as he believed her trouble lay with her liver and not her soul.

I believe that there are many cases of mental depression and moral disturbances with men where the cause of the trouble lies at the glans penis, and that a sharp bistuary and a few stitches would roll off a burden of sorrow and sin as quickly as Bunyan eventually lost his.

As a means of retaining syphilitic poison an elongated and constricted foreskin is an active factor.

I may be pardoned for reciting a case or two which have occurred in my own practice, where circumcision has relieved convulsions and restored health where other treatment had failed. One was that of a lad about ten years of age, who had frequently recurring convulsions which nothing seemed to modify or relieve and which physicians and kind friends had attributed to all the ailments the human body is subject to. At last, phimosis being suggested, it was sought for, found and relieved. No more convulsions have occurred in the twenty years which have since elapsed.

Another case has been brought to my attention in which as many as forty-five convulsions, distinct and separate, occurred in twenty-four hours; circumcision being performed after this state of affairs had existed for many months, at once lessened the spasms to four or five a day and slight ones at that. When last heard from several days had passed and no convulsions had appeared.

A third case had been under the care of one or more skillful physicians who had treated the case as one of digestive disturbance. Upon being called to attend the child I substituted the bistuory for digestives and circumcision succeeded where pepsin and castor oil had failed.

Another source of trouble to those needing circumcision and not knowing it, is the depletion of their pocketbook.

These youths, annoyed by some trouble with the penis which they do not understand and too modest to apply to their father for advice and afraid, or ashamed, to consult the family physician, take the advice given by the advertisement of the newspaper quack, "when all others fail consult Dr. Blank," and at once become the victim of those nasty parasites upon the body of the medical profession, to the detriment of their health and the lessening of their wealth.

I have a friend who in early youth became and continued the victim of these harpies for years. He was more tormented than consoled by their advice, and, as he told me, paid near $500 for medicine which, he afterward discovered, was the ordinary tincture of iron. Dr. Agnew circumcised him and all his trouble disappeared.

Illustrative cases of other effects of phimosis and the resultant relief of circumcision, selected from our own practice and culled from books and journals, might easily be given, but enough has been shown to prove the advantage of the operation in *marked* cases, and lest in later life any prepuce should prove to be too long or too constricted,

it is perfectly safe and justifiable to circumcise any case as to which there is the least doubt.

Its effect upon health and longevity is apparently shown in the Jewish race as well as the effect upon their domestic relations.

The late honored and revered D. Hayes Agnew, previously referred to, once said to me that he believed it would be to the advantage of the world if every male child was circumcised.

Many reasons why circumcision is a moral and physical advantage have not been stated and in the brief space of a few moments cannot be. I would, however, call your attention to the list (quoted in the earlier part of this paper) of the ill results that may follow the neglect of circumcision, and give them and the ills following in their train as the necessities for its performance.

As to the moral advantage to be derived from this operation there can be no possible doubt. Anything that promotes human comfort and increases human happiness or that lessens the tendency to physical and moral sin, must be of an advantage, moral as well as physical.

The subject has but been touched upon. Hours instead of moments might be profitably spent in dilating upon it. As the question has been looked into I have been intensely surprised and interested at the depth and richness of a theme which at first appeared trivial and trite.

As to the methods of the operation, the clearest and most practical that I have found are those set forth in the work of White and Martin already referred to.

For a work upon this subject which contains both wit and wisdom and at the same time is historical and instructive; a work which you can enjoy beside the "red lamp," I would refer you to the book entitled "Circumcision," by Remondino, and published by F. A. Davis.

As when in our dealings with the adult female sex, after weeks of treatment and hours of anxious thought over nervous trouble the case has only become more obscure, we have learned to interrogate the sexual organs as a possible source of the trouble. So, too, some of us have learned in the treatment of various nervous disturbances in the early life of boys to look for the source of the trouble in an elongated and perhaps constricted and adherent foreskin. We may also have been much chagrined to have had such a solution of the trouble suggested by some motherly old body, whose observation and memory have stood her in better stead than our own.

ESSAY.

BY J. BRUYERE, M.S., M.D., TRENTON, N. J.

THE PROGRESS, PROBLEMS AND PROSPECTS IN MEDICINE.*

The subject is so broad and comprehensive, that we cannot do more than briefly consider the course of medical evolution, and some of the present medical problems and prospects. In the dim past so many theories, hypotheses and opinions emanated from such a few facts, that medical systems flourished in abundance. It would be impossible, in the brief time at our disposal, to describe the medical systems and dogmas of the past, so we will only briefly allude to these, and pass on to a brief sketch of the progress, in some of the numerous branches of medical science, for the last fifty years. The last decade has been a period of advancement without parallel in the world's history. This progress has revolutionized the principles and practice of medicine, hence it would require much patient research and philosophic insight to successfully trace the evolution of medicine during this period. It would require the pen of a medical genius to fittingly portray the good accomplished in preventing suffering and saving life. It is to be hoped for the honor and glory of medicine, that the time is not far distant when some worthy medical historian will fittingly perform this task.

Throughout the ages medical evolution has kept pace with intellectual development. An infant age bred fear, bigotry, superstition and great credulity. Diseases arose from unseen and mysterious causes, hence remedies were equally mysterious, and charms, sorceries, propitiatory prayers, sacrifices and gifts were offered to appease the wrath of the gods, and to secure the assistance of some health-giving Deity. During the age of barbarism, medicine was a species of sorcery, and excited fear in the popular mind. During the age of superstition, medicine was the "mystery of the alchemist," and excited feelings of wonder. During the ecclesiastical age, medicine became oracular, and it was accepted with absolute credulity. During the

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metaphysical age, medicine was speculative, and was accepted dogmatically. During the age of experience and superficial observation, medicine became empirical and specifics were demanded. During the present scientific age, fear, sorcery, alchemism, mysticism, dogmatism, empiracism, etc., have vanished, and the scientific spirit and methods have taken their place. For many centuries, owing to bigotry, superstition and the spirit of speculation, there was only progressive accumulation, and but little scientific advance in medicine. There were no laws regulating the practice of medicine, and even as late as the Middle Ages, the regular profession was composed of a mongrel hoard of barbers, bath-keepers, bone-setters, butchers, calf-doctors, crystallomancers, druggists, exorcists, mid-wives, priests, lithotomists, rat-catchers, shepherds, hermits, magicians, jugglers, gypsies and numerous other charlatans, mountebanks and quacks. General practice was largely in the hands of the priesthood, and surgery in the hands of social outcasts, until the sixteenth century, when there was a separation of the priesthood from medicine. At this time there was a recognition of the importance of surgery by anatomists and clergy, and a drawing together of medicine and surgery. The ecclesiastical doctors were prone to speculation and believed in the efficacy of charms and relics, and in the intervention of the martyrs and saints. Among the causes of disease they included demons, witches and ghosts, "the fall of man," "the faculty of appetite seated in the spleen or in the stomach," "the poisoning of the vital spirits," etc. They despised surgery and regarded operations as beneath their dignity. In the thirteenth century surgical operations were forbidden, dissection was regarded as a sacrilege and books on medicine were banished from the monasteries. The works of Arnold de Villeneuve, Andreas Vesalius and others "were condemned by the inquisition, because they commended experiment rather than mere speculations." They were thought to be athesists and heretics, and were persecuted by the church, which later ridiculed Boyer, Jenner, Simpson and many others, because they feared them and the effects of their discoveries. This early persecution by the church is not to be wondered at, if, as Park tells us, many of the clergy "were mere lascivious gluttons and considered even washing unchristian." They denounced all observations and experimentations, and believed that "wisdom, like the grace of God, was obtainable only by fasting, supplication and poverty." All truth was to be re-

vealed by their inner consciousness; they imagined, they speculated, they dogmatized, and like Pilate's wife, pronounced judgment from their dreams. The period previous to the sixteenth century was one of cabalistic theories, of mysticism and occultism, when gods, devils and stars were supposed to exercise an influence over the conditions and affairs of men. During the Middle Ages occult philosophy consisted of theosophy, magic, astrology and alchemy. At the beginning of the seventeenth century the natural sciences began to flourish, and observation and experimentation added many new facts to human knowledge. Modern realism, or inductive philosophy, exact methods and originality, were beginning to take effect, and were greatly advanced by such men as Sydenham, Bacon and others. A new era in medical science commenced when the inductive system of philosophy passed into medicine. Previous to the seventeenth century they philosophized and dogmatized about medicine, and the humble laborers of research were held in contempt. Dogmatism was the result of self-confident ignorance and flourished when the principles underlying the treatment of disease were merely speculative. As we become more thoughtful and rational, dogmatism declines. It is now regarded as an act of supererrogation and presumption, on the part of anyone, to assume an autocratic dogmatism and express ex-cathedra opinions on any subject until the evidence is first carefully examined and set forth as a basis of belief. The reason is no longer in subjection to the imagination and we no longer seek scientific truths by introspection. Men are being taught to leave their minds free to receive the impressions of truth, to interrogate nature by observation and experiment, and inductive reasoning, and to prove all things, and hold nothing for true until the ground of certitude have been ascertained. Individual experience, deductive reasoning and many theoretical beliefs are being eliminated by inductive and scientific methods. Sir Astley Cooper's motto, "First observe, and then think," is a good one. Observation and experimentation now precede conclusions, and have overthrown the hypotheses, which were sustained only by speculation. Hypotheses must be proven, and beliefs must be founded on evidence and supported by facts. There must be a cause for every effect, and a reason for every belief. Each one must use his own eyes, and must think and observe for himself. The ipse dixit, or ex-cathedra opinions, of the great masters are no longer blindly accepted. We cannot rely upon dogmas, or the inherited opinions and beliefs, which rest

solely on authority and not on their own intrinsic merits. We must accept "truth for authority, not authority for truth." Dogmatic authority, steeped "in port and prejudice," made of medicine a black art, and shrouded her in mystery. For long years medicine occupied the realm of mystery and was accepted on faith. A sanctified faith, that has a spiritual and intellectual foundation, is commendable, but a blind, unquestioning, superstitious faith, founded on great credulity and ignorance, imprisons the reason and leads not towards knowledge, wisdom or truth. It is said that "a judicious distrust and a wise skepticism are the sinews of the understanding." The great Sydenham was called "a man of many doubts." He was an intelligent and original thinker and investigator, and was loyal to truth rather than to authority. This is the scientific spirit and has made the present an era of modern science. If we are to have scientists in medicine, the laboratory, hospital dispensary and clinic must continue to furnish experimental and practical information. True scientific methods are being developed by numerous inquiries, keen experimentation and close research. Medicine is now an inductive as well as a deductive science. The scientific method now predominates, and special systems with their "isms" and "pathies," are fast disappearing. A broader intelligence recognizes the solid foundation on which medicine rests,—a foundation that is laid by research. observation and experimentation, the same as physics, chemistry or any other branch of science. Regular, or rational medicine, has received its greatest impulse and development through scientific methods.

Although a broader intelligence demands of medicine observation, positive knowledge, absolute proof, or the scientific spirit and methods, nevertheless, there are many who cannot distinguish between science and pseudo science. There are still many pretentious theories that are built on delusions in physics and philosophy. The human mind developes slowly. The faith and belief of the ignorant and credulous "rise by means of heated air—the fevered breath of enthusiastic ignorance." To all such, medicine is "the grand idol of human credulity," and their faith and belief become a port, free of entry, to all unsupported individual convictions. Over this port of entry is written the motto "Credo quia impossible est,"—I believe because it is impossible. Christian science, ostheopathy and all the other "pathies" and "isms," find easy entry and shelter here. Human ignorance and credulity have ever been the fruitful soil from which

have germinated and flourished many pretentious theories. Scientific medicine will never be fully appreciated until the laity more fully understand the scientific tendencies and spirit of the age. But, thanks to the writings of Darwin, Spencer, Hæckel, Wallace, Huxley, Tyndall and others, people are being taught scientific methods of thought, and the importance of investigation by the senses. The pure science of nature, founded upon scientific investigation, is the most influential philosophic doctrine of this century. Of course, medical thought, as well as the popular mind, has been largely guided by these philosophic doctrines. All advance in physics, chemistry, natural history, botany, zoology, comparative anatomy, etc., have advanced the science of medicine.

Medicine has ever appreciated and profited by the advance in all the various departments of science, still she has not been entirely receptive. She has found it more blessed to give than to receive, and during the last fifty years she has given to science many of the grandest ideas and truths of the century, These we will consider later. When this Society was founded, May 23rd, 1848, medicine was an art rather than a science. The *post hoc ergo propter hoc error* which, at this time, received so much attention, has been discarded through rational observation. We now have more knowledge of, and respect for, nature than formerly, and no longer attempt to make art superior to nature. Medical truths are now discovered by applying sound medical observation and judgment to the phenomena of life. Many complaints that were popularly believed to be due to meteoric influences and the appearance of comets or to the "visitations of God," and called by medical men "idiopathic," are now rightly assigned to their real cause. Increased knowlege in the nature and causation of disease has led to more effective treatment. We no longer delight in polipharmacy with its shot-gun prescriptions. It is said that Huxham gave messes to his patients containing more than four hundred ingredients. The empirics prescribed nostrums and panaceas for a name, but now empiricism has largely given away to rationalism, and physiologic and pathologic investigations have led to rational therapeutics.

The great advance in physical diagnosis, and in the knowledge of the physiological action of drugs, has banished this pseudo-scientific audacity in the use of remedies. We now use extracts and active principles for a definite physiological effect, rather than crude drugs

and mysterious combinations. Our experimental and physiological laboratories have greatly increased our knowledge of biology, organic chemistry and the physiological action of drugs, and have given us the alkaloids, the active principles, and many new and useful remedial agents, which we now prescribe for their physiological effects, and for this alone. The blind faith in many remedies and methods has disappeared. Calomel was formerly regarded as "the Samson" of the Materia Medica, and bleeding was both a necessity and a virtue. It is said that in one year, (1833), there were "forty-one million five hundred thousand leeches imported into France." Broussais is said to have used one hundred thousand leeches in his own hospital wards during one year, and Bouillard is said to have surpassed even this. When we also consider the amount of blood extracted by the lance and by cupping, in this country as well as in France, we must conclude that our forefathers were sanguinary heroes. Heroic in their faith—a divine quality that is often misplaced. Our Puritan forefathers were martyrs to faith. They believed in a combination of theology and medicine, or the "angelical conjunction," as it was called. They place great confidence in the medical skill of their spiritual authorities, and Cotton Mather, who believed in witchcraft, etc., "was regarded as an eminent authority on medical subjects."

These theologico-medical experts wrote many pamphlets and works on medicine, which must have excited the risibilities of the saints. They believed most intensely in the efficacy of prayer, which they often practiced at the bedside of their patients. Such an act is commendable. but the humor of the situation dawns upon us only when we are informed that the results they sought, by their prayers, was, as they quaintly expressed it, to "give them a lift Heavenward." What would be thought of the doctor today who sought such therapeutic results. What sublime faith our forefathers must have had to trust those whose avowed purpose was to give them a lift Heavenward. How different is the faith of their degenerate sons, who do not have even such confidence in those whose avowed purpose it is to keep them out of the bottomless pit. How sublime also was their faith in the justness and generosity of God, acting through human instrumentality, or by proxy. Dr. Stafford says: "No man can, with a good conscience, take a fee or a reward before the party receive benefit apparent, and then he is not to demand anything but what God shall put into the heart of the party to give him. And he is not to refuse

anything that shall be given him, for it comes from God." Oh tempora, Oh mores! Such views could do nothing else than to breed infidelity and atheism among doctors. But times have changed. The simple faith of childhood fades away as thought and knowledge develop. The primitive faith in medicine has been banished by scientific methods of observation and experimentation, which have caused more progress in medicine during the last fifty years than during all previous time.

Previous to 1848 nothing was known about bacteria, infection, immunity, antisepsis, asepsis, toxins, antitoxine, etc. Gynacology, dermatology, pathology, etc., were in their infancy, and bacteriology was unknown. But little was known about the diseases of the heart, lungs, stomach, liver and kidneys. Nervous diseases, and diseases of the nose, throat, eye and ear were comparatively unknown. There were no laboratories, no recitations, no graded course, no ward classes, and no text-books were required. The medical student had no actual contact with disease, but after six months of didactic lectures, received his diploma, and went forth to kill or cure, as the fates decreed. There were no Boards of Health except the microbes and the buzzards; and hygiene, sanitation and preventative medicine were in their swaddling clothes. There were no microscopical or chemical examinations of the blood, or of the secretions or excretions. Dietetics, during the last half century, has been established upon a rational scientific basis. Pediatrics, which dates from "De morbis puerorum" —260 B. C., received but little attention until quite recently. The first text-book on diseases of children that was published in this country was written in 1825, by Logan and Dewees. We had no journals treating of pediatrics until 1868, and there was not an exclusively Pediatric Society until 1888. There was not a hospital, in this country or England, for diseases of children until 1852. In 1854 a child's hospital was founded in New York, and in 1855 one in Philadelphia. These were the first established in America. There was no special chair in Pediatrics, in any of our medical colleges until 1860, and this was filled by the distinguished Jacobi. The "humane sciences,"—anthropology, psychology, criminology and sociology, have been formed and developed by the investigators in the field of neurology. The study of neurology has done much to explain the cause of degeneracy and the philosophy of reform. It has ameliorated the conditions in our schools, asylums, reformatories and prisons. It has

led to a better knowledge of self, to a better knowledge of the effects of heredity and environment, and to a more sympathetic and more human treatment of the weak and erring. It has taught us the broad distinction between abnormality and immorality. It has dispelled many harsh and ascetic beliefs, and ameliorated many social conditions. It created such broad sympathies and altruistic sentiments, that harsh and inhuman treatment of the degenerate classes no longer prevails.

Only a few years ago the insane were supposed to be possessed with a devil, bewitched, or the victims of divine displeasure. They were regarded as heretics, witches and criminals. But the study of neurology, inductive inquiry and physological research, have taught us that insanity, like all forms of degeneracy, is a disease to be treated, rather than a crime to be punished. Great has been the advance during the last fifty years. In 1848 there were about thirty medical colleges and 3,500 students; now it is estimated that we have about 170 medical schools, 28,000 students, and about 186,000 physicians. Then, libraries, medical journals, societies and scientific associations were few; now they are very numerous, almost universal.

With this broad and general consideration of the subject, which is merely superficial, we will now mention some of the more important discoveries and indicate their effect on general medicine. A short time previous to the organization of this Society the first great discovery in medicine was made. Anæsthesia, a term first suggested by Oliver Wendell Holmes, was at this time running the gauntlet. Holmes tells us that by means of anæsthesia "the fierce extremity of suffering has been steeped in the waters of oblivion, and the deepest furrows in the knotted brow of agony have been smoothed away forever." He, and many others, lauded this great discovery but some of our ministerial brethren anathematised it as "a decoy of satan—which will harden society, and rob God of the deep earnest cries which arise in time of trouble for help." The clergy for a long time did not appreciate the moral and spiritual influences exerted by medicine, but at the present time they are our staunch friends and allies, and no longer fear the results of scientific investigations.

Sulphuric ether was first discovered in the thirteenth century. In 1540 it was called the sweet oil of vitriol, and in 1730 it was first called an ether. In 1796 Beddoes published a work on "Factitious Airs," in which he says that "Ether in pectoral catarrh gives almost immediate

relief, both to the oppression and pain in the chest," and further states that "after inhaling two spoonfulls he fell asleep." In 1839, in Pereira's well known treatise on Materia Medica, the intoxicating and stupefying qualities of ether are mentioned, and its exhilarating effects and its relief of cholic and pain were well known. Nothing could better illustrate the unscientific methods of the age than this, and the great need of close observation and experimentation. With all this knowledge before him it seems strange that Velpeau, in 1839, should write, "To escape pain in surgical operations is a chimera which we are not permitted to look for in our time." At this very time negroes on southern plantations were holding "ether frolics," and knew much about the anæsthetic effect of ether. Ether and its blessings might have been obtained centuries before, had there been greater observation and experimentation. At present, with our laboratories for scientific research, medical truths do not slumber so long in the lap of forgetfulness.

On October 16th, 1846, occurred the first authentic and public exhibition of anæsthesia during a surgical operation, although this was not the first time that ether had been used for the purpose of producing insensibility to pain. In May, 1842, Crawford Long, of Georgia, removed from the neck of a patient a small tumor, while under ether, and without any pain. In 1844, Horace Wells, a dentist of Hartford, first demonstrated the painless extraction of teeth when under the effects of nitrous oxide gas. During this same year, Dr. Marcy, of Hartford, performed a painless operation on a sailor, while under the influence of ether. In 1841 W. T. G. Morton entered the office of Horace Wells, as an assistant, and while here became impressed with the nature and usefulness of nitrous oxide gas. He saw in this a pecuniary reward, so he applied to Dr. C. P. Jackson, of Hartford, a noted chemist, to ascertain the best method of manufacturing the nitrous oxide gas, for anæsthetic use, and Dr. Jackson first suggested to him the use of ether for this purpose. On September 30th, 1846, Morton gave ether for the extraction of a tooth, and the operation proved painless. The next day he proceeded to have his supposed discovery patented. Then he called upon Warren, at the Massachusetts General Hospital, soliciting his coöperation, and on October 16th, 1846, he made his first public experiment with his so-called lethon, which was simply ether disguised by aromatic oils. Warren succeeded in removing a tumor from the neck of a young man, and

the operation was pronounced a great success. Had Morton possessed a scientific and philanthropic spirit, instead of one of peculation and cupidity, he would never have disguised the ether, or patented his supposed discovery and sold office rights to dentists. The hospital was the pedestal that caused his borrowed light to shine abroad like a newly discover sun. Morton, in attempting to find a market for his patent, first publicly proved to the world that ether was a safe anæsthetic in surgical operations. Nevertheless, the Medical Society of Paris, in 1848, recognized the claim of Horace Wells as having been the first to apply the use of vapors or gases for painless surgical operations, and on Well's monument in Hartford, is the following inscription, "Horace Wells, who discovered anæsthesia, November, 1844."

Chloroform was discovered in 1831, but was not introduced for anæsthetic purposes until 1847, when Simpson used it in his obstetric work. Cocaine was discovered by Nieman, in 1860, and was first applied as a local anæsthetis, or analgesic, in 1862, by Schroff. Karl Koller first demonstrated its use as an ocular analgesic, and reported the same in 1884, when it first came into general prominence Since this time, rhigolin or chloride of ethyl, Schleich's inflitration method, eucaine, holocain, aneson, orthoform, etc., have been used as analgesics, in minor surgery. Before anæsthesia, patients sometimes preferred death to the pain and agony of an operation, which frequently terminated in death, from the depressing effects of simple shock and pain. Now there is no more pain, no more agony, and no more incautious haste on the part of the surgeon. Far more difficult and better operations can now be performed. Anæsthesia was one of the grandest discoveries of all time, and the human race owes a debt of gratitude to the profession that has done so much toward the relief of suffering and the prolongation of life.

Another grand discovery, that has no parallel in the history of medicine, was the discovery of bacteriology and antisepsis. We will next, therefore, consider bacteriology,—its history and development, its influence over etiology, pathology and the principles and practice of medicine, together with the results that have followed this discovery, such as the knowledge of infection, hygiene, preventive medicine, sanitation, Boards of Health, antisepsis, asepsis, serum therapy, immunization, etc. The germ theory of disease was anticipated by Terentius Varro, 115 B. C. He advised people to avoid marshy

places, which breed "certain minute animals, invisible to the eye. and which, carried by the winds, penetrate the mouth and nostrils, and propogate obstinate diseases." It seems that nearly, if not every, great discovery was anticipated centuries before. For a century or more previous to the experiments of Pasteur, Tyndall, and others, scientists and naturalists believed in the spontaneous generation of life. They knew of the existence of micro-organisms,—"monads" or "vibriones," as they were called, but they did not know that all life springs from pre-existing life. They did not know the life history of micro-organisms, or the part they play in nature or disease. Still there were a few early investigators who believed in the germ theory of disease. In 1675 Leeuwenhoek described the "animalcules" in water, and in 1683 he discovered micro-organisms in the saliva, in the intestinal evacuants and elsewhere, and this led him to believe in the relation of micro-organisms to disease. He believed that all diseases and pathological conditions were caused by organisms. In 1762 Plenciz declared that all infectious diseases were due to living substances capable of multiplying within the body, and of transmission through the air. He discovered "animalculæ" in all decomposing matter, and believed that decomposition was always due to organisms, and that each disease had a special germ. The times, unfortunately for posterity, were not ripe for such observations or theories, which at this time were regarded as due to an unbalanced mind. Ozanam, in 1820, refers to Plenciz's theories and calls them "absurd hypotheses."

Robert Boyle, in the seventeenth century, believed that a knowledge of the cause of fermentation would explain the phenomena of fevers and other diseases. Many had vague notions about a "contagium vivium," or minute organisms capable of spreading and reproducing themselves. In 1835 Bassi discovered the parasitic origin of silkworm disease. In 1836 Schulze proved the presence of organisms in the air, and in 1837 Schwann found minute globular bodies, which he believed to be the cause of alcoholic fermentation, and later proved that there was nothing in the elements of the air to cause fermentation, as heated or sterilized air would not produce fermentation in boiled substances. In 1843 Helmholtz confirmed Schwann's discovery. In 1839 Schonlein discovered that a parasitic fungus caused the contagious disease of the head, called favus. Vogel discovered the oidium albicans in 1840, and Gordsir the sarcina ventriculi, in

1841. In 1849 and '50 the first and largest of the pathogenic organisms,—the anthrax bacillus—was identified and described by Pollender and Devaine. So important was this discovery that it has been called the key-note to the arch of bacteriology. Notwithstanding this discovery, and all previous observations, it was still generally believed that micro-organisms might arise de novo, or be generated spontaneously. Liebig thought that putrefaction was due "to the absence of oxygen" and disturbed "molecular arrangements." Schroeder and Dusch, in 1854, proved that filtered air would not produce fermentation, and Schwann, Helmholtz and others, in 1848, knew that fermention and putrefaction were intimately connected with the presence of organisms. But it remained for Pasteur, in 1858, to scientifically explain the mysteries of fermentation and to disprove the theory of spontaneous generation. There were many previous experiments and observations that anticipated Pasteur's work, but with greater zeal, and with scientific methods of research, he did more than any other observer to popularize and give scientific form to the discoveries previously made. Tyndall and Cohn's observation on the micro-organisms in the air, their relation to fermentation and putrefaction, and the results of temperature on germ life, did much to banish the idea of spontaneous generation and to create an earnest study of the relation of germs to disease. Pasteur, in 1858, showed that lactic, butyric and acetic fermentation, and the fermentation of the impure tartrate of lime, were due to micro-organisms,—and later affirmed that putrefaction is only a special case of fermentation. He investigated the diseases of silk-worms, the cause of splenic fever, etc., and showed that sheep and cows vaccinated with the attenuated bacilli of splenic fever were made immune. He first scientificially demonstrated that infection is a phenomenon of microbial parasitism, and first discovered the principle of vaccination, and proved that the pathogenic microbes could be so attenuated or weakened, as to produce a mild disease and future immunity. Pasteur's experimental work was along the line of fermentation, infection, contagion and vaccination. These, together with his discovery of the new treatment of hydrophobia, which is said to cure more than ninety-nine per cent. of all cases, have made him a great benefactor to humanity. Pasteur undoubtedly laid the foundation for bacteriology, but many earnest workers aided in erecting the superstructure.

Cohn classified and studied the forms of bacteria, which he re-

garded as constant. His classification and theories were later modified and enlarged by Lankester, Lister, Billroth, Klebs and many others, who added greatly to our knowledge of the morphology of the micro-organism. While these observations in morphology were being made, other observers were doing much to establish the relation of micro-organisms to disease. Villemin, in 1865, first demonstrated the fact that tuberculosis is an infectious disease and could be transmitted by an innoculation. Cohnheim, in 1877, confirmed these observations, and this led many to search for the bacillus. Baumgärten first discovered the bacillus, but Koch, in 1882, first fully established the identity of the organism, and made successful cultures. In 1866 Rindfleisch described "vibrois" that he found in infectious wounds, and Recklinghausen and Waldeyer record a similar discovery in pyæmia. It must be borne in mind that micro-organisms were called by different names at different times. They were called "monads," "vibriones," "animalculæ," "infusoria," "schyzomycetes," microbes, etc. These micro-organisms were regarded as animals until 1852, when Perty demonstrated that they belonged to the vegetable kingdom. In 1881 Laveran discovered the plosmodium malariæ, and Ogston and Rosenbaum discovered pyogenic organisms. Israel and Ponfick, in 1882, first discovered the parasite, or bacillus, of actinomycosis. During this same year Koch identified the micro-organisms of malignant œdema, and Friedlander, in 1883, discovered the bacillus of pneumonia. Lœffler and Schutz discovered the specific germ of glanders,—the bacillus mallei—and in 1884 Koch discovered the specific organisms of Asiatic cholera. Nicolaier, in 1884, discovered the bacillus of tetanus, and recently the specific bacillus of yellow fever,—the bacillus icteroides—has been discovered. Klein and others have also recently isolated a streptococcus that is regarded as the cause of scarlet fever. Eberth, Koch, Gaffky and others demonstrated the fact that typhoid fever is due to a special micro-organism.

In 1870 Klebs described how organisms in wounds enter the circulation, and later Oertel, Klebs, Eberth and others established the constant presence of bacteria in diptheritic deposits. Martin, in 1892, describes three forms of the Klebs-Lœffler bacillus,—the long, medium and short—and showed that one or more of these are found with the streptococcus and other germs, in every case of diptheria. Much was done by Latour, Schwann, Pollender, Devaine, Henle, Oertel, Pasteur, Tyndall, Klebs, Lister, Koch and other close obser-

vers, to firmly establish the relation of micro-organisms to disease. Many of the forty odd specific infectious diseases are now known to be due to micro-organisms. For a long period germs had not been isolated and no cultures, or innoculations, had been made; hence, the only proof of their action in disease was the constancy of their presence in infectious diseases. This led many to believe that organisms might be the result, rather than the cause, of disease. Some thought that organisms were present in healthy tissues, and could not be the cause of disease. Koch, in 1881, and subsequently, by his careful scientific methods, did much to establish the foundation of bacteriology. He demonstrated the distinct varieties of infection, the possibility of isolating their germs, of making cultures and innoculating animals by the same. He first used for bacteriological purposes, the Abbe system of substage condensing apparatus, the aniline dyes, the cultivation of bacteria on solid media, etc., and furnished many original and important suggestions. Such, in brief, is the history of bacteriology, which has had such a marked influence in revolutionizing etiology, pathology and the principles and practice of medicine. The modern germ theory of disease now fully explains spontaneous generation, fermentation, putrefaction, infection, etc. The discovery of minute organisms and the study of their life history, their culture and growth, their likes and dislikes, their secretions and chemical character, is teaching us the origin of the infective maladies and the laws of their development.

The study of microscopy and bacteriology have established a new era in the practice of medicine by giving to etiology and pathology a new impulse and many scientific truths. Twenty-five or thirty years ago the uses of the microscope were limited. There was no section cutting, no staining process, no oil immersion or apochromatic lense. But little was known of etiology or pathology. An ocular description of morbid changes was given, with but little knowledge of how or why these changes took place. This constituted morbid anatomy, which was afterwards changed to the science of pathology by the advance in bacteriology and microscopy. The "cell theory" and the "germ theory" established modern pathology. In pathology, system followed system, but these have all perished and been replaced by cellular pathology, which is the accepted theory of today. Hooke discovered plant-cells, and later animal-cells were discovered by Schwann, and cell-nuclei by Robert Brown. Hooke, in 1667, intro-

duced the term "cell," and Malphighi and Grew did much to establish the "cell doctrine." Merbel, in 1806, and Johannes Müller, in 1835, more elaborately described cells, but it remained for Schwann, in 1839, to establish the "cell theory." Schleiden, Baumgärtner and Schwann, proved the cellular origin of the various vegetable and animal tissues, and their investigations became the foundation of all modern histology and led to Virchow's "cellular pathology," and the development of microscopic botany, etc. In 1858 Virchow formulated his doctrine of "modern vitalism," which is the cell-theory of the present day. He showed that every organism is composed of an aggregation of cells, and that every cell has an individual existence, a unity and purpose of its own. He expressed a strong belief in the continuity of living matter. This belief he recently reaffirmed in a most impressive manner. At the Twelfth International Medical Congress, lately held at Moscow, he reiterated with great earnestness his view of cellular life. "Life," he said, "has no other origin than from life itself. Life is in the cell. He who speaks of serum as a vital force apart from cells is wrong. The grand truth of cellular succession may be assailed in the future as it has been in the past, but it will never be thrown to earth."

In 1856 Virchow introduced microscopical anatomy, and in 1866 published his great work on "Tumors." He demonstrated the fact that the blood is not the prime cause of dyscrasia, as Andrel supposed, but only the medium through which dyscrasia is produced. He also showed that pyæmia accompanies thrombotic processes and is not due to the absorption of pus. Accepting the "cell" and the "germ theories," and by the use of the microscope and scientific methods, he, more than any other, established the modern science of pathology. The first pathology written in the English language was by Gross, in 1839, but still in 1848 pathology was almost an unknown science. The first pathological society was founded in Dublin in 1839.

The New York Pathological Society was founded in 1844, the London in 1846, and the Philadelphia in 1857. The rapid advance in bacteriology and pathology has taught us much about the processes and causation of disease, and has greatly modified the principles and practice of medicine. Not only did bacteriology revolutionize pathology and etiology, but it gave rise to hygiene, preventive medicine, sanitation, Boards of Health, the knowledge of infection, serum-

therapy, immunization, antisepsis, asepsis, etc. We can only briefly allude to these. When Jenner discovered the principles of vaccination, little did he think that his virus would become the forerunner of the antitoxines, and be suggestive of sero-therapy, immunity or preventive medicine. Scientific investigation into the nature and cause of disease has led to natural methods of cure,—to organo-therapy, serum-therapy, antisepsis, etc. Organo-therapy aims to supply to an organism the chemical or vital elements which it requires. These elements are the animal extracts, which are secured from the glands and tissues of the body; such as the thyroid, thymus and lymphatic glands,—the brain, heart, stomach, kidneys, spleen, pancreas, testes, ovary, uterus, blood, bone-marrow, supra-renal capsule, etc. When there is loss of function of these glands or tissues, their extracts from a corresponding healthy organ or tissue is given to supply the deficiency, and must be continued regularly, just as food to relieve hunger.

Whatever the function of the thyroid, whether to change or destroy injurious substances in the blood, or to secrete substances to aid in the development of bones, muscles and nerves, its secretion passes directly into the blood, where it has a physiological action. When the thyroid gland is removed or its functions impaired by disease, as in mixœdema, cretinism and exophthalmic goitre, it has been ascertained that the pathological conditions engendered are removed or greatly improved by the administration of thyroid juice, extract or powder. Thyroid secretion, or extract, has been used to great advantage in anemic obesity, struma, uterine fibroids, uterine hemorrhage, at menopause, epileptic psychosis, acromegaly, rachitis, Besedow's disease, mild cases of diabetes, psoriasis, lupus, icthyosis, eczema, pityrisis rubra, alopcia and various kinds of insanity.

Idothyrine, the active principle from the thyroid glands, seems to be less objectionable and just as useful. The pituitary body may be of use in acromegaly, and bone-marrow in anemia. If the supra-renal capsules are removed, emaciation, feebleness and death follow, but if injections of the fresh extracts of the organ is given, death is at least retarded, if not averted. Supra-renal extract is used in eye diseases, etc. It is a powerful astringent, and is sometimes injected into the eye and upper air passages with good results in congestive conditions. It is also a heart tonic and may increase the red corpuscles and act as a vaso-constrictor, etc. Brown-Sequard's testicular juice is no longer

regarded as an elixir of life, although it accomplished considerable through auto-suggestion. Babes and Paul have made the glycerine extract from the brain, which may remedy some of the defects of nature by increasing cerebral activity. Other glandular extracts are given with varying results, and the time may not be far distant when organ-therapy has a well-defined field of usefulness. Nevertheless, animal therapeutics remain yet to be developed, for physiological chemistry, experimental physiology and clinical observation have yet to determine the definite uses of the animal extracts.

Serum-therapy, though still in its infancy, promises brilliant results. Richet, in 1889, claims to have given the first sero-therapeutic injection, and Bouchard, in 1890, published the first contribution on serum therapeutics. Behring and Kitasato, in 1890, showed the nature and effects of antitoxic serum on the fixed tissue cells, and in 1892 Behring showed the splendid results of serum-therapy on diphtheria. Diphtheria antitoxin not only has immunizing qualities, but is also a veritable remedy, having reduced the mortality from forty-seven to eight per cent. The serum treatment for bubonic plague has been demonstrated to be of great value. The serum treatment of pneumonia is also said to be very successful in Italy. De Renzi, Ughetti, Cantieri, Messolongo and others declare that "it is more efficacious than any other agent." Wasserman lately reports excellent results. Haffkins vaccinations for cholera are said to afford considerable protection against this disease, vaccinated persons being twenty times safer from attack and eighteen times securer from death than the unvaccinated. Out of over two hundred coolies inoculated by Dr. Hare, under Haffkins directions, only 2.55 per cent. died, while among the inoculated, nineteen per cent. died. Sanarelli has prepared a serum that has reduced the mortality in yellow fever from fifty to twenty-seven per cent. Bird serum, according to Behring, is superior to horse serum and other animal serum in tuberculosis, still anti-tuberculous serum is not very favorable in its results. The anti-streptococcic, anti-syphilitic, anti-typhoid, anti-tetanic, anti-snakebite and many other serums have been used with varying results, but space will not permit their further enumeration. Lately, the mixed toxins have been used with good results in the treatment of disease. It is claimed that the mixed toxins of the streptococcus of erysipelas and the bacillus prodigiosis have been used in the treatment of sarcoma, with marked results, etc.

The knowledge that bacteriology gave us of the infectious diseases,

led us, as we have previously stated, to a better knowledge of vaccination, and developed the idea of serum therapy for its curative and immunizing properties. It also developed and gave a new meaning and impulse to hygiene, sanitation, boards of health or preventive medicine, and finally led to Listerism, antisepsis and asepsis. The origin of the infectious diseases being known, their prevention became apparent. Dirt no longer possessed the odor or sanctity, but became the symbol of death. That "cleanliness is next to Godliness" is also the teaching of bacteriology. The Mosaic laws enjoined cleanliness, isolation of the sick and wholesome food and drink, hence the Jews enjoyed a remarkable immunity from epidemic diseases. A greater knowledge of hygiene has led to greatly decreased mortality. Two centuries ago the mortality in London was eighty per 1,000; it is now eighteen per 1,000. A century ago scurvy was to be found on nearly all ships, and jails and hospitals were the hotbeds of disease. Thirty years ago the English troops, at home, died at the rate of twenty per 1,000; now the death-rate is less than one-half this amount. In the fourteenth century the plague or black-death is said, by Wingate, to have destroyed "13,000,000 people in China, 24 000,000 in Oriental countries, and not less than 25,000,000 people in Europe." Cholera, yellow fever, small-pox, etc., have also been epidemic for hundreds of years and caused millions of deaths. In Jessora, India, in 1817, more than ten thousand people died of cholera in two weeks, and in Benares, in 1818, fifteen thousand persons died in two months. In 1878 there were 15,934 deaths from yellow fever in Louisiana, Tennessee, Alabama and Mississippi. Small-pox exterminated whole tribes and almost wiped out whole nations. In Mexico it attacked "3,500,000 of the population, and leaving none to bury them." Dr. Crighton estimated that in Russia, "every seventh child died annually of the small-pox," and Colon tells us that in France the annual number of deaths from small-pox was from sixty thousand to seventy-two thousand.

When bacteriology revealed to us the cause of these deadly infectious diseases, boards of health were appointed as guardians of the public health. In 1865 Louisiana appointed the first State Board of Health to cope with yellow fever, but this had such limited powers and was so brief in its existence that the Massachusetts State Board, appointed in 1869, should be regarded as the first actual State Board in the Union. Now, nearly every State and town has its board of

health. France, Germany and England have their National Boards of Health or Departments of Health, but the United States is still lacking in this.

Increased knowledge as to the cause of many diseases has led to the adoption of preventive means. The adoption of public health acts by sanitary authorities has increased the general health, especially among the poor. "The mortality from small-pox," says Parker, of London, "has diminished 96 per cent.; deaths from fevers have declined 82 per cent.; deaths from typhus, 95 per cent.; deaths from enteric fever, 60 per cent.; deaths from scarlet fever, 81 per cent. and deaths from phthisis, 46 per cent., and diphtheria about fifty-nine per cent." The decrease in the deaths from malaria and many other zymotic diseases has been very great. Parker says that "the general effect of improvement in sanitation is that 600,000 persons reached the age of twenty-one who, sixty years ago, would have died." Skillful operations and appropriate medicines have saved many, but preventive medicine has saved far more. Through preventive medicine, which is now being established on a scientific foundation, infectious diseases will soon become unknown in civilized countries. To this end, individuals and communities must act in accordance with well-established hygienic laws.

Increased diagnostic skill has done much for preventive medicine. Diagnosis is now arrived at by a process of reasoning, not by intuition, as formerly. An elaborate description of symptoms no longer takes the place of accurate diagnosis. We no longer base diagnosis and treatment on the theories of disease. Diagnosis is now the result of scientific precision in methods of thought and observation, together with a skillful use of instruments of precision. By such methods, we now quickly and definitely recognize many diseases that were formerly recognized only after long periods of observation and many autopsies. Time is thus gained by an early and precise diagnosis, and the community, by being forewarned is largely forearmed, so far as epidemics are concerned. Modern diagnosis, therapeutics and operations all aim at prevention. And yet we are told, by Gould, that more money is devoted to astronomy than to the prevention of disease. Men seem to be more interested in the stars and constellations than in their bodies or physiological life. Nevertheless, the progress of the age in which we live is characterized by preventive medicine, and private and public hygiene. This fact is a monument to the

honor and glory of medical men, rather than to the laity, who have done more for astronomy than for preventive medicine. Prevention is far better than cure. This is the medical idea, object and aim of the future. We now have a proper respect for Hygeia—the goddess of health. We no longer respect ascetics, dyspeptics and pale melancholics. Those pale, devitalized, saintly people, filled with negative goodness and amiable tameness are insipid, and incapable of those positive, robust. aggressive virtues, so much in demand at the present day. Good digestion and assimilation, or good health—the prevention of disease—is the sub-stratum of happiness, of usefulness, and of morality.

The great object and aim of medicine is to secure and maintain health, or to prevent disease. If this is so, should not doctors strongly and unitedly protest against the violation of the laws of heredity, which produce so much disease. Why should not syphilis, consumption, scrofula, epilepsy, inebriety, insanity, criminal tendencies, etc., be a restriction to marriage? The increase of degeneracy is largely due to the violation of the laws of heredity, and to unregulated marriages. The altruism that is a product of civilization protects the degenerates and fosters abnormalities.

This is an age of charities, of asylums, hospitals, reformatories, prisons, sanatoriums and eleemosynary institutions of every kind, and the demand still increases. Christian civilization. by reversing the Darwinian law, makes the survival of the unfittest a possibility. Our social and political institutions and the general welfare of the race, require that the wholesale production of abnormalities cease. Is there any just reason why the insane, epileptic, syphilitic, consumptive, and other degenerates, should marry and bring into the world those who are a burden to themselves and to society? Is it altruistic to permit the propagation of hereditary disease and crime? Do we not owe something to humanity? To entail disease, evil tendencies—degeneracy on a child, is this not cruel and unkind? Is not marriage under such circumstances based on sentiment, rather than upon reason and justice? Degeneracy has become such an enormous burden to society, such a blight on human happiness and well-being, that the laws of heredity must be considered, and marriage must be regulated by the law of conscience, if not by the law of the land. The future altruist will consider the methods of preventing degeneracy, rather than methods of cure. We now have sanitary laws and we will then

have hereditary laws to protect posterity. A parent is not allowed to give material poison to the offspring, so as to produce weakness, disease and death, but he is allowed to transmit congenital and moral poison to his offspring, and thus consign it to a fate worse than death.

A better civilization will remedy this. We now have laws to protect the bodies from external disease; we will then have laws to protect the child from inherited disease. Prevention is the watchword of the future, both for individuals and nations alike. Herein lies the hope of the physician, of the individual, and of the nation. Preventive medicine will teach people how to live and will be the index of a higher civilization. We need a higher moral education, based upon the study of medicine. The grandest study for mankind is man. Seven thousand murders take place annually in the United States, and about 122 legal executions and 131 lynchings. There are about 100,000 orphans, and according to J. S. Billing's statistics for 1890, there were 106,252 insane; 95,571 imbeciles and idiots; 50,411 blind; 41,283 deaf-mutes; 73,045 paupers and 86,000 prisoners. It is said that from sixty-five per cent. to seventy-five per cent. of crime, imbecility and insanity are due to heredity, and yet only about one-tenth of the criminal offences are detected and punished.

During the past ten years crime has increased 60%. When we consider the great increase among the delinquent, defective and dependent classes, who are filling to overflowing our prisons, asylums and reformatories, and when we consider the enormous burden they are to society, should we not, as physicians, do all in our power to prevent this great increase in degeneracy? With this general consideration of preventive medicine, we will pass on to the consideration of the prevention of infection by means of antisepsis, which was originated by Lister. In 1867 he first published his experiments on the antiseptic treatment of wounds. His theories were received with distrust and contempt, and it was said that "a man who would claim to heal wounds without suppuration was a visionary." Not until about twenty years after this publication was antiseptic surgery fully accepted and developed.

Gross, "the Nestor of American surgery," in his "System of Surgery," (1882 edition), says that although various observers "have established the existence of myriads of low forms of organisms in our breathing atmosphere, the demonstration of living, disease-producing germs is wanting." He thought that putrefaction, suppuration, blood-poison-

ing, etc., were induced by "epithelial and pus cells, and other particles of organic matter" held in suspension in "the atmosphere of ill-ventilated and long-occupied hospitals." The true cause of abscess, septicæmia, hospital gangrene, erysipelas, tetanis, etc., were at this time still sub-judice. Lister at first supposed that micro-organisms existed principally in the air; hence, ligatures, instruments, dressings, sponges, etc., were only cleansed. He soon ascertained that spraying the air was not sufficient, as everything that came in contact with wounds might contain germs. Following this idea, the skin of the patient, the hands of the operator, and all bandages, ligatures, etc., were made free of germs by antiseptic solutions.

Germicidal agents now came rapidly in vogue, and Lister not only filled the operating room with the vapor of carbolic acid, but anticepticized all tissues and surgical appliances. Observation soon demonstrated that the air did not contain so many deadly germs as supposed, and that such persistent and strong irrigation was not only not essential, but irritated the tissues and was injurious. Dressings that had been sterilized by dry heat, live steam, or boiling water, were found effective; hence, it became apparent that antiseptic solutions were to be used to irrigate tissues only when some septic material was to be washed away. Thus, the antiseptic gave way to the aseptic, and the old adage, that prevention is better than cure, was again confirmed. The germicidal powers of the vital tissues later became known, and the necessity of strong antiseptic fluids, which irritate and impair the power of these tissues, was found to be limited. From these observations it was found that the aseptic and dry method is a great improvement over the antiseptic method. Before Lister's great discovery of antisepsis, our hospitals were hot-beds of contagion. Fevers blood-poisoning, erysipelas, suppuration, hospital gangrene, etc., were very common. When pain was abolished by anæsthesia, operations increased in number, and as nothing was known of antisepsis, there was unfortunately a corresponding increase in hospital diseases.

Fifty years ago the operating room was said to have been the dirtiest room in the hospital. Sawdust was strewn over the floor to catch the blood, and the surgeon wore his dirtiest garments, which were sometimes "stiff with blood and animal filth." "He was as proud of this blood-stained rag as a peer of ancient lineage may be of his faded ceremonial robes, and he would step into the operating room like a great matador into the ring," and proceed with the opera-

tion, which was followed by horrible moans and shrieks, entreaties and curses. During these terrible times it was regarded as "indecent, unwomanly and revolting," for a nurse to enter the hospital. Anæsthesia and antisepsis civilized hospitals and made nursing a profession of refinement and honor. Cleanliness is now regarded as next to godliness. Hospital diseases have become almost a thing of the past, and mortality records have been greatly lowered. During the civil war, in the Massachusetts General Hospital, which had a world-wide reputation for neatness, cleanliness and efficiency, hospital gangrene became epidemic and surgical operations had to be abandoned. There were epidemics of hospital gangrene in many of the prisons and military and municipal hospitals, and infectious diseases were common and caused more deaths on the battlefields than were due to wounds. In fact, during our late rebellion, there were 2,642 cases of hospital gangrene reported, with 1,142 deaths. Had we possessed a knowledge of antisepsis, at this time, thousands of lives would have been saved.

We no longer have such widespread epidemics ot erysipelas, dysentery, gangrene and other infectious diseases. Antisepsis has made "laudible pus, both unlaudible and reprehensible." Formerly the surgeon would go from ward to ward handling the various cases, with unwashed hands, and spreading the contagion impartially. The risks of surgery, at such a time, were very great. In the large hospitals of Great Britain the deaths from amputation of a limb were at least one to three. Simpson collected a series of 2,089 cases, and ascertained that the mortality was as high as one in two and four-tenths. In the Paris hospital the mortality after amputations was nearly one in two, and in 1861 it was three in five, and a few years later it was estimated at fifty-eight per cent.

Writing from Paris in September, 1861, Sims says: "In hospital practice almost all cases of amputation die," and attributes it to their methods of dressing wounds. In Germany and Austria, the mortality varied from forty-three to forty-six per cent. The mortality for amputations of the thigh, in 1840, was sixty-three per cent.; in 1890, twenty-one per cent.; but Estes, in 1894, in seventy-seven cases, had a mortality of only ten and four-tenths per cent. Before anæsthesia and antisepsis, the development of a skillful technique in the handling of surgical instruments and the dexterity and rapidity of operation were the chief essentials. Now the glass-top tables, iron bedsteads,

tiled floors and walls, and the great improvement in hospital methods, in heating, ventilating, general sanitation, cleanliness and aseptic methods bespeak another age. Modern surgery owes everything to anæsthesia and antisepsis.

We will next briefly consider the progress that has been made in surgery and other branches of medicine during the last fifty years. The scientific progress in surgery has been so great that no surgical genius, who, thirty or forty years ago, went to the land of shadows could return and teach or practice modern surgery. He would not understand the surgical vocabulary, and would be more than astonished at our modern operations on the brain, chest, abdomen and pelvis. In 1579 Ambroise Parè says of surgery, that antiquity has "nothing wherein it may exceed us, beside the glory of invention; nor posterity anything left but a certain small hope to add some things." Every generation seems to think that it is the crowning glory of all the ages, and has reached the "sumum bonum" of all knowledge.

Scarcely twenty years ago Sir John Erichsen declared that "operative surgery had nearly reached its furthest possible limits of development," and that there were certain regions of the body, such as the brain, the heart and the lungs, that "must ever remain inaccessible to the surgeon's knife." Goltz, Broca, Hitzig, Fritsch, Ferrier, Horseley and Macewen, during the last fifteen years, have solved many neurological problems in cerebral surgery, and have recently created a new department in surgery. Under antiseptic precautions and a better knowledge of localized centres, the brain substance is dealt with as freely as any other structure. The motor, special sense and cortical centres are now well known, and we are thus able to classify and localize brain lesions. We now operate for fractures of the skull, intra-cranial hemorrhage, abscess, epilepsy, tumors, insanity, imbecility, hydrocephalous, trifacial neuralgia, and sometimes even remove the gasserian ganglion. We also evacuate pleural effusions, invade the lungs, and suture the pericardium, and even the heart itself. Tumors are removed from the liver, the spleen is extirpated, the great veins are sutured and tied, and the appendix,—thanks to Parker and Fitz—is now successfully removed.

The stomach is now opened and sutured, and the pylorus is dilated and partially or entirely removed. In August, 1897, Schlatter, of Zurich, successfully removed the entire stomach, which was extensively involved by cancer. Eight months later the patient had gained

thirteen pounds, and was doing nicely until a metastasis of the original disease, involving the mesenteric and other glands, caused her death on October 29th, 1898, about fourteen months after the operation. This was the first case of the entire removal of the stomach with the survival of the patient. On February 24th, 1898, Dr. Charles B. Brigham, of San Francisco, successfully removed the entire stomach in a woman sixty-six years of age, for carcinoma. Seven weeks after the operation the patient was reported to be gaining in weight, and the condition "satisfactory in every respect." In May, 1898, Dr. George C. MacDonald, of San Francisco, removed the entire stomach from Jean Patriti, for cancerous involvement. Patriti has since regained his weight and health, and is said to be able to digest the ordinary articles of diet without any discomfort or inconvenience. Cholecystectomy was first performed by Langenbuch in 1880. Pancreatic cysts are now removed, and Simons, in 1870, demonstrated the fact that the kidney is an accessible organ. A floating kidney is secured, cysts and abscesses are evacuated, calculi are removed, and sometimes even the kidney itself.

In the future, the various internal organs may prove to be luxuries rather than necessities. Ribs, sternum, and portions of the chest wall are now resected with impunity. Tumors of the spine, and in fact all tumors, are now far more amenable to treatment than formerly. The advance in plastic surgery has been very great. Seen's method of making intestinal anastomosis has greatly advanced abdominal surgery, and we now remove portions of the intestine that are injured or diseased. In cancer of the rectum, large portions have been resected, —in some cases as much as twelve inches, with a mortality of twenty per cent., and permanent cures in one-third of the cases. Dr. Guiseppe Ruggi reports the successful "resection of ten feet and nine inches of the small intestine of a small boy," eight years of age. In five weeks the child was perfectly well. Dr. Dresmann, in thirty or more cases, has resected the intestine by the yard. Supra-pubic cystotomy, an operation that was re-introduced in 1875, has greatly facilitated the removal of certain conditions of the bladder. Formerly there was only palliative treatment for enlarged prostate; now the patient can have his choice of prostatectomy, orchidectomy, or resection of the vas-deferens. The radical cure of hernia is modern, and we now rarely have a death or a recurrence of the trouble.

Fifty years ago the removal of goitre was almost surely fatal.

Gibson tells us that "favorable terminations are extremely rare," and that the operation "is attended with difficulties which should dismay the most expert and enterprising surgeon." We now operate on goitre, and remove laryngeal growths with great success. In 1895, Kocher reported 1,000 operations on goitre with only one per cent. mortality. According to Reverdin the mortality in 6,103 operations has been 2.88 per cent. For inter-glandular enucleation, and in uncomplicated cases, the mortality has been about zero. Subcutaneous osteotomy was introduced by Lagembeck in 1854. In 1873 Esmarch introduced the rubber bandage, making many operations bloodless,—thus adding to the convenience and safety of operations. Orthopedic surgery, operations on nerves, etc., have been largely developed during the last half century. Billroth "made the first resection of the layrnx and of the stomach."

America has contributed largely toward the advancement of surgery. She gave to us anæsthesia, the successful ligation of the arteria-immonenata, the operation for vesico-vaginal fistula, ovariotomy, intestinal anastamosis, cholecystotomy, etc. Wells and Morton gave to us anæsthesia. Valentine Mott first tied the innomenate artery, and was the first to successfully extirpate the clavicle for tumor. Marion Sims discovered the operation for vesico-vaginal fistula. McDowell performed the first rational ovariotomy, and Nicholas Senn gave to us intestinal anastomosis. Cholecystotomy was first performed by Bobbs, of Indianapolis. John Collins Warren first successfully tapped the pericardium, and Henry J. Bigelow performed the first excision of the hip in this country, and in 1852 invented the operation known as litholapaxy. Nathan R. Smith invented the anterior splint. Many other operations, together with instruments, splints, mechanical devices, and methods of technique have been the result of American genius.

We cannot pause to describe these various operations, but will give a brief history of ovariotomy. The first successful ovariotomy was performed by a sow gelder of Germany, on his daughter, in 1517, but the first rational and deliberate ovariotomy was performed by McDowell, of Kentucky, in 1809. This operation, however, was not established till 1858, when Wells took it up. Gibson, whose surgery was published in 1845, does not mention ovariotomy, but Liston and Mütter's surgery, which was published in one small volume, in 1846, speaks of the "Removal of Ovarian Tumors," in the following lan-

guage: "I need not tell you that wounds of the abdomen are dangerous; patients perish from trifling operations where the viscera are not at all involved, and yet you are aware that, of late years, the belly has been opened intentionally with the view of ascertaining the existence of tumors, and of taking them out. Some people do not hesitate to make a hole in the abdomen, put in their fingers, and feel what is there, strangely enough exemplifying what Hudribas says, 'As if a man should be dissected to see what part is disaffected.'" Liston condemns the operation, and Mütter says, "that in a few years the measure will be consigned to the oblivion it so richly merits." Meigs, in 1862, declares that those who operate should be indicted for murder, as the operation is a crime, and Dieffenbach, one of the boldest of surgeons, in 1843, wrote that ovariotomy was murder, and that everyone who performed it should be put into the dock. Now, if these cases are not operated upon it would be considered as culpable neglect.

Mütter states that from 1809 to 1846 there had been seventy cases of ovariotomy reported, and he gave the particulars of thirty-one cases. "Out of these," he says, "sixteen died; in some of them there was no tumor, and in some it was not removed." In 1847 there had been less than forty ovariotomies performed in America, and the mortality was over fifty per cent. Notwithstanding this high mortality, the operation finally became a popular one, and it is said that some surgeons have performed from one to two thousand operations with a present mortality of about three per cent. Taite, of Birmingham, and Keith, of Edinburgh, in 1886, reported a mortality of only about three per cent. Lately, Dr. R. L. Morris succeeded in transplanting the ovary, in two out of five cases, and pregnancy followed. Even a small piece of an ovary is sufficient for transplantation. Sims and Emmett were the pioneers in American gynæcology. The first journal devoted to obstetrics and gynæcology appeared in 1868, but the specialty of gynæcology was not recognized exclusively by any medical journal until 1869, when the journal of the Gynæcological Society of Boston was published, which was the first society of its kind in this country or Europe. The medical schools of this time had no department of gynæcology,—obstetrics covered all this ground. Dr. Atwood, in 1745, became the first obstetrician in America. At this time obstetrics was regarded as unbecoming a gentleman. Owing to the great prejudice against gentlemen accoucheurs, and the treat-

ment of female complaints by gentlemen, the special diseases of women were comparatively unknown until a recent date.

From the days of Hippocrates until quite a recent period they speak of ulcer of the cervix, pyometria, dropsy of the uterus, etc. Emmett first showed that these so-called ulcers were simply lacerations or tears, and devised the operation of trachelorraphy for their cure. Pyometria we now recognize as pelvic abscess, and dropsy of the uterus as ovarian cysts. In early Roman times, Soranus and Themison described the vaginal hysterectomy, and in 1507, Brengarius described the removal of the inverted uterus. The first operation for the removal of a malignant uterus was performed by Patella, in 1812. In 1813, J. C. M. Langenbeck performed a vaginal hysterectomy for the removal of a cancerous uterus, which Senn tells us was "the first deliberate attempt for removal of the uterus through the vagina for cancer." This operation was a success. On April 16th, 1850, Paul S. Eve, an American, performed a vaginal hysterectomy. The third deliberate operation was performed in 1882, by Sauter. Ambroise Paré revived the use of the speculum used formerly by Soranus. Racamier gave us the uterine sound and currette, and Lambelle, Boivin and others added greatly to the development of gynæcology. Simpson, by his original and vigorous writings, did much to advance the study of uterine displacements and uterine pathology, and Bennett did much to extend our knowledge of inflammation of the uterus, etc. But it remained for America to give to gynæcology its greatest impulse. "If all that Sims had done for gynæcology were suppressed, we should find that we had retrograded at least a quarter of a century," says T. Gaillard Thomas. Sims' "Clinical Notes on Uterine Surgery," published in 1863, completely revolutionized gynæcology, and gave such dignity and importance to the special diseases of women, that professorships of gynæcology, that were formerly few and unworthy the name, now sprung up in every medical school, and assumed a high degree of importance. Sims' silver wire, perforated shot, and especially his speculum, which allowed a thorough inspection of the vagina, made the treatment of vasico-vaginal fistula practicable. Owing to the great advance in gynæcology it is said that abdominal hysterectomy is now no more dangerous than was ovariotomy five or six years ago.

The advance in surgery, and the allied sciences, has given us many delicate instruments for diagnostic and other purposes; such as the stethoscope, cystoscope gastro-diaphanoscope, electric headlight,

clinical thermometers, opthalmoscope, laryngoscope, otoscope, spectroscope, specula, endescope, proctoscope, aspirator, retractor, hemostatic forceps, transfusion apparatus, sphygmograph, cardiograph, kymograph, blood-counter, hemometer, hemotokrit, tambours, centrifuge, and various electrical apparatus, etc. The phonendoscope, which has just been invented by Blenchi and Bazzi, of France, is said to gather up all vibrations, condense them, and carry them to the ear far better than the stethoscope. The scientific progress in surgery is due more to the development in bacteriology, pathology, embryology and comparative anatomy—to the discovery of anæsthesia and antisepsis, and to delicate instruments of precision, than to any improvement on old methods, in the technique of the operation, or to any increased skill on the part of the modern surgeon. In quickness and manual dexterity the surgeons of the past may have exceeded us. It is said that Mareschal, surgeon to Louis XIV, performed eight lithotomies in half an hour. Instruments of precision have greatly aided diagnosis and facilitated operations. For example, Kelly's urethral specula and the knee chest position, enables us to see the mucus lining of the bladder, to catheterize the ureters, and to pass the long elastic catheter into the pelvis of the kidney itself. The unique and startling discovery of the X-rays, in 1895, for example, has done much to increase the diagnostic skill of the surgeon. Facts are now clearly set forth by radiographs that were formerly smothered in surmise. By means of the skiagraphs we detect foreign bodies in the soft parts and recognize the existence of fractures, dislocations, irregularities, deformities, new growths, calcarious infiltration of arteries, calculi in bladder and kidneys, malformations, etc. The skillful and proper use of the Rœntgen rays will mark an epoch in the history of medicine.

Great has been the advance in surgery. All splints, dressings and surgical appliances have been greatly improved. Cohnheim's experiments, in 1867, greatly increased our knowledge of inflammation, and of the treatment of fractures, etc. Previous to a knowledge of bacteriology, antisepsis, and the true nature and cause of inflammation, compound fractures were regarded as very serious. The mortality was said to be two out of three, now it is scarcely more than two out of every hundred. Inflammation was formerly regarded as essential to repair or the healing of wounds and suppuration was looked upon as normal. Now we regard inflammation as independent of the healing process, and suppuration as the result of pyogenic organisms.

Wounds are now kept aseptic, and suppuration is almost unknown. Nussbaum says that "antiseptic cat-gut is without doubt Lister's greatest discovery," as it did so much towards keeping wounds aseptic. Senn expressed the same view, and said that "the aseptic absorbable ligature is one of the greatest achievements in modern surgery." Owing to the great advance in surgery, surgical diseases are differently classified, and differently treated. Improved classifications and methods, the great number of trained laboratory and clinical workers, and the great number of libraries, laboratories, journals and societies, all indicate future advance, as well as present attainments. This increase in surgical knowledge has added much to the comfort, happiness and length of life of suffering humanity. Many who were helpless cases in 1848, are now operated on with success.

The results of antiseptic surgery have been so wonderful that surgeons are tempted to depend more upon the brilliant and spectacular results of the knife than upon the slower and less impressive methods of nature. It has been said that "the modern surgeon, clad in antisepsis as the Lady in Comis was 'clothed round with chastity,' defies the rabble route of microbes, and dares things which, only a short time ago, were looked upon as beyond the wildest dreams of scientific enthusiasm." There is enough that is heroic in modern surgery to please the grim prophet of hero worship. The ambition to discover something new and brilliant, often leads to hasty conclusion and blinds one to scientific thought and patient research. Notwithstanding this, medical science, and especially the science of surgery, is in advance of all others. The surgery of the future will be remedial, rather than radical—preventive, rather than curative. We will then remove diseased portions of an organ, rather than the entire organ. The tendency is towards conservative surgery. A greater knowledge of natural and acquired immunity, of sero-therapy, etc., is tending to make surgery remedial and preventive. A conservative, efficient and conscientious surgeon, who realizes that his first duty is to his patient, is a Christian altruist and a benefactor to the human race. With this very brief and imperfect narration of the progress in surgery, we will pass on to a very brief consideration of dermatology, and conclude with a few words on present problems and future prospects.

Fifty years ago dermatology was in a state of chaos. John Hunter divided skin affections into "those which sulphur could cure, those

which mercury could cure and those which the devil himself could not cure." Willan and Bateman, in 1808 and later, attempted to reduce this chaos to cosmos. This attempt met its greatest fulfillment by the publication of Orasmus Wilson's work on "Diseases of the Skin," in 1851. But later, Hebra's writings completely revolutionized dermatology, and formulated a classification based on the pathological anatomy of the skin. Previous to this time, it is said that the doctor, in his treatment of skin diseases, "aimed at nothing and hit it." Professor James C. White first introduced Hebra's teachings in 1859, and in 1861 "gave the first course of lectures on diseases of the skin, at Harvard." The first American text-book on dermatology appeared in 1845, written by N. Worcester. Nearly all dermatological lore at this time was obtained from Paris and Vienna. The first lectures on dermatology were given in some of the medical schools of New York, in 1846. The *American Journal of Syphilography and Dermatology* was founded in 1870, and the American Dermatological Association in 1877.

Up to this time America had contributed but little to dermatology; now Duhring, White, Bulkley and others are recognized as high authorities. The development of microscopy, bacteriology, etc., led to a more accurate diagnosis, a better classification and to an increased knowledge of the nature and cause of skin diseases. The etiology of most of the skin diseases is now accurately known. It is known that many diseases are due to parasites and microbes. Lupus, leprosy, carbuncle, glanders, sycosis, feruncle, impetigo-contagiosa, and most probably syphilis, eczema, psoriasis, alopecia areta, acne and certain forms of erythema, seborrahœa, etc., are of microbic origin. This knowledge has led to the use of parasiticides and germicides, which, together with the use of serums and organic extracts, promises much for the future of dermatology. It may be long before a complete classification of diseases of the skin is possible; still, great advance in this line is being made. We now leave nature more to herself and we soothe and strengthen, rather than irritate and deplete. Pathological investigation has determined the nature of the various skin excrescences or growths, and the various other branches of medicine are adding greatly to our knowledge of the treatment of skin diseases, so that a continuous advance in dermatology is secured.

In conclusion, we will briefly consider some of the present problems and the future prospects of medicine. As great as has been the

progress in medicine during the last fifty years, there are still many problems that remain unsolved. Seneca said that "there is always something left to do, and that, even after a thousand centuries, no one will lack the opportunity to discover more." Those who come after us will find plenty of occasion to wonder at the ignorance of their forefathers, for medicine is still an unfinished science and an imperfect art. Medical knowledge is at present a segment and not a perfect circle, hence medicine is still full of mysteries, and some medical truths are as yet imperfectly grasped. The attitude of every true, conscientious, scientific student of medicine is that of a humble seeker after truth, for there are none so wise that truth becomes to them a perfect circle.

Unprejudiced and intelligent observation of the phenomena of nature characterizes the medical profession of today. This has accomplished much in the past and has brought us to the dawn of still greater discoveries. There is no science today that has made greater strides than that of medicine. The progress of the past is a guarantee that the problems of the future will receive earnest attention and final solution. But as yet we do not know the cause of many phenomena that daily confront us. There still remains many problems in diagnosis and therapy. The bedside study of cases is still essential, for no specialist in his laboratory, no microscopist, can always give us an accurate diagnosis. There must still be clinical study and observation superadded to all instruments and appliances for diagnosis. Improved methods can never take the place of thought and rational observation. We must rely upon self as well as upon machines. In so doing we will often find that clinical observation is more reliable than mechanic aids alone. For example, almost every pathogenic germ has been found in the secretions of healthy individuals. The bacillus of diphtheria has been found on the fauces of hundreds of healthy children. The microscope often fails to reveal the tuberical bacillus when consumption is known to be present.

Dr. Heneage Gibbs, one of the foremost bacteriologists, recently denied the "importance of bacteria as a causative factor of disease." He declares that he "has conducted hundreds of autopsies on consumptives without finding a trace of the bacillus of tuberculosis." The microscope and nearly all tests and appliances are, from a diagnostic standpoint, far from accurate. Ehrlich's Diazo reaction in the urine and Widal's reaction in the blood of typhoid cases, are import-

ant and quite constant, but not distinctive or pathognomonic, as these reactions are found in a number of other infectious diseases, and are sometimes wanting when typhoid is present. These reactions, therefore, are of general, not of special significance. The degree of the reaction usually indicates the severity of the disease. The limitations of the microscope and the fallibility of many instruments and tests, greatly add to the problems in diagnosis and also in therapeutics, for the application of remedies must be based on skillful diagnosis, rather than upon the nomenclature of disease. We need a more correct diagnosis and a better nomenclature of disease before we can trace, by cause and effect, the result of remedies and formulate a cure.

Symptoms should be classified in a scientific manner, so as to aid us in making our inductions; we could then more easily determine the beneficial symptoms from those that are detrimental. In order to do this we must understand the exact nature of disease, and must ascertain the various causes that produce disease. This is most difficult, for we now know that disease is not an entity due to a simple or specific cause, but is usually the resultant effect of many causes. We have, therefore, no distinct diseases, hence "no absolute specific character belongs to any disease." The great problem in diagnosis, therefore, is how to ascertain all the causal factors that constitute any given disease, so that we can remove these causes and prevent their evil effects. The increase in our knowledge of the causes of disease is an index of the real progress that we are making in the science of medicine. We now doctor causes, rather than symptoms, for prophylaxis is the very essence of cure. Etiology thus becomes of prime importance and gives to us many problems for future solution.

For example, can a micro-organism, under different circumstances, produce different diseases, and the variation in the virulence of different epidemics? We know that micro-organisms are greatly influenced and modified in form and activity, according to their food supply, temperature, moisture, the presence of oxygen, light, other organisms, etc. Can not the same germ have the conditions of its development so changed by environment, as to undergo progressive modifications sufficient to account for the variations in the virulence of different epidemics, and to produce various symptoms and diseases? Does not the pneumococcus, when subject to different environments, produce numerous infectious processes, such as pneumonia, pleurisy, endocarditis, pericarditis, peritonitis, cerebro-spinal meningitis, arth-

ritis, general septicæmia, etc.? May not the same specific cause give rise to different diseases in different patients? Can the same micro-organism produce erysipelas in one person and puerperal fever in another? Are all infectious diseases due to individual or specific germs and their modification by environment, or are most infectious diseases due to a combination of germs and of circumstances?

Can a disease like croupous pneumonia or diphtheria be the result of two or more micro-organisms acting alone or in combination? Is pneumonia, cystitis, meningitis, hepatitis, tonsillitis, carditis, gastritis, nephritis, entiritis, etc., always the same in kind, or are there many kinds of these diseases, corresponding to the combination of germs and circumstances present? Do suppuration, erysipelas, septicæmia, pyæmia, pneumonia, etc., depend upon their own specific germs, or are they produced by various germs or a mixed infection? If numerous microbes can and do develop in the same organ at the same time, is not their resultant effect often responsible for the varieties of the diseased conditions? Are the symptoms at the beginning and termination of a microbial disease always due to the same kind of germs? Why is it that various organisms may produce the same pathological, anatomical and clinical symptoms?

Why does not a specific bacterium always produce the same effects, the same symptomatology and pathologic phenomena? For example, why is it, as Mikulicz tells us, that "all forms of peritonitis run the same clinical course, regardless of the bacteria that causes it?" May we not have phthisis pulmonalis without the presence of the tubercle bacilli and with streptothrix instead? Can not pneumonia be produced by the tubercle bacilli and also by the microbes of diphtheria, typhoid fever, anthrax, erysipelas and influenza? Is not epidemic cerebro-spinal meningitis often due to a variety of organisms, such as the meningococcus, pneumococcus, streptococcus, tubercle bacilli, anthrax, typhoid germs, etc.? May mumps, orchitis, meningitis, pleurisy, goitre, hepatitis, melancholia, etc., be due to typhoid infections? and may not other things than typhoid germs give rise to typhoid symptoms, while typhoid germs may give rise to other than typhoid symptoms? Are the meningococcus and the gonococcus identical organisms, or are they only closely related?

As there is no individual germ peculiar to each disease, as environment modifies the neutritive and reproductive activities of germs, thus causing a great diversity in their virulence and in the symptoms and

diseases they reproduce, as many germs in combination may produce a given disease, and as many diseases may be produced by a variety of germs, it follows that the problems in etiology are the most difficult. In fact, in every department of medicine the problems that confront us are very numerous.

There are many problems in tuberculosis. Why do dogs. goats, rats, white mice, etc., and all cold-blooded animals possess immunity, while cats, rabbits, field mice, pigs and fowls are susceptible? Why is tuberculosis common in cattle and rare in sheep and horses? Why are rabbits and guinea-pigs very susceptible to inoculation, and yet rarely have tuberculosis? and why do apes and monkeys contract tuberculosis so readily in confinement and never in their native wilds? On the contrary, the wild Indian is very prone to consumption, even when occupying one of the finest climates in the world—the death-rate among them is about twice that of the white race. Why is the Indian, who lives an outdoor life in a beautiful climate and free from the effeminating effects of civilization, more prone to consumption than his white brother? Why is the negro, in this country and in the West Indies, more prone to this disease than in Africa? and why are the Jews far less susceptible than many other races? If tuberculosis can not be directly transmitted, can not the virus be transmitted that gives rise to infantile tuberculosis, or is this always the result of infection? Is not congenital tuberculosis more common than we imagine? What is the peculiar character of the tissue-soil that allows the seeds or germs of tuberculosis to develop?

All weak and delicate people are not predisposed to consumption. Lowered vitality does not always favor infection. Is tissue-resistance, therefore, always greatest in those of the greatest vitality or physical strength? It is said that immunity depends on tissue-resistance, and that tissue-resistance depends largely on healthy tissues and favoring circumstances. It is also known that tissue-resistance may be inherited or acquired, independent of strong vitality. A sick infant can resist some germs better than a strong man, and some people are easily inoculated or infected, others not. Do the bacilli of tuberculosis, or their product, induce suppuration, or is this due to a mixed infection? Is the virus which produces scrofula, tuberculous adenitis or tuberculosis of the lymph-glands, the same as the virus that produces tuberculosis in other parts of the body? Does it differ in kind, or is it only milder in form?

Why do measles, whooping-cough, diabetes. etc., so strongly predispose to tuberculosis? Why are the lungs most susceptible in adults, and the lymph-glands in children? Why does scrofula in childhood furnish a partial immunity to tuberculosis in adult life? Is pneumonia, resulting from tuberculosis, due to the tubercle bacillus and its toxines, or is it due to secondary infection with other germs? Is secondary infection frequent? Are cavities in the lungs produced by the tubercle bacilli, or are the pus germs,—the streptococcus, etc. —responsible for all cavities? Why does a free incision into tubercular tissue so often set up healthy action in the parts? For example, why does an abdominal incision often cure peritoneal tuberculosis, or an incision into tubercular bones and joints so often have a curative effect? Why does suppuration at once cease, when we open an abscess antiseptically, although pyrogenic organisms are present in vast numbers? Why do tubercle bacilli sometimes cause tuberculous tissue, sometimes a cheesy mass, and sometimes a chronic abscess? Is the bovine tubercle bacillus identical with the tubercle bacillus of man?

Theobold Smith has shown that these bacilli are not identical, and casts discredit upon the opinion that tuberculosis can be spread from dairy products, while Dr. Busch "believes that all the tuberculosis affecting the human race comes from the dairy cow." Obermuller finds Koch's bacilli in butter, while Robiniovitch fails to find any. Is a large per cent. of infant tuberculosis due to milk infected by the tubercle bacilli, or its toxins? Many believe that most milk is filled with tubercle bacilli, and regarding the infant stomach as a germ incubator instead of a sterilizing chamber, they sterilize and Pastuerize the milk, and thus impair digestion and nutrition. Is consumption of vegetable origin, and is the bacillus a vegetable parasite and to be found on certain grasses, as affirmed by M. Moeller and Robiniovitch? Can artificial immunity to the tubercle bacillus be produced by inoculation with the tubercle bacilli, in the early stages of tuberculosis, before the vital forces have been reduced by the disease.

It is estimated that there are over 150,000 deaths annually from consumption, and that about one in every sixty is infected. Nevertheless, Parker, of London, tells us that the mortality for consumption has diminished forty-six per cent. As the germs of tuberculosis are so widely disseminated—revealing their presence in about one-half of all cases of autopsy, from whatever cause, and thus showing that

possibly the majority of mankind are infected, although in only a minority is the germ able to overcome vital resistance and produce fatal effects,— does it not follow that mankind should, in the course of time, acquire a partial or total immunity to this disease. Should not better sanitation, better hygienic laws and acquired immunity, eventually stamp out this terrible disease. In India there is an acquired immunity to cholera, which in this country is very deadly. Measles have almost depopulated the Pacific Islands, but here they are mild. Wherever a disease has been long prevalent there seems to be eventually developed an acquired immunity. Landerer declares that cinnamic acid "cures all cases in the early stages, and many others." Murphy, of Chicago, claims to have secured excellent results by compression of the lungs by nitrogen gas, and others, with the serum and climatic treatment, claim excellent results; but is not the decrease of the death-rate, from tuberculosis, due far more to improvement in sanitation and gradually acquired immunity, than to all medical treatments combined?

We will next briefly consider some of the problems in diphtheria and typhoid fever. The true bacillus of diphtheria can only be identified by its cultural peculiarities and its pathogenic activity. Being irregular in outline, especially in cultures, and closely resembling other organisms found in the mouth, particularly in those having decayed teeth, mistakes are easily made, when only a microscopic examination is made. We cannot always, from the form of a bacillus, determine the class to which it belongs, for its form depends largely on the nature of its environment or the media employed in its development There have been found bacilli identical, in form, to the bacilli of true diphtheria, and yet these were harmless when inoculated. Why does the bacillus of diphtheria sometimes entirely or partially lose its virulence and become incapable of producing death? Does it lose its virulence as the disease progresses toward recovery, and is this difference in virulency due to difference in species, or difference in circumstances or environment? We do not know why the bacillus of diphtheria may be harmless at one time, cause true diphtheria at another, or membranous rhinitis at still another? The New York Board of Health found the germ of diphtheria present in eighty per cent. of the reported cases of membranous croup. Is membranous croup, therefore, simply laryngeal diphtheria?

Why is it that susceptibility to the typhoid bacillus can be artific-

ially induced in the lower animals that are scarcely susceptible to this germ, by the injection of the products of certain saprophytes. Alessi tells us that rats, guinea-pigs and rabbits, when compelled to inhale the emanations from decomposing products in cess-pools, etc., become susceptible to typhoid infection. Is resistance to the typhoid bacillus weakened by the toxic action of the saprophytes? If not, what are the things or conditions that diminish natural resistance to infection in the various zymotic diseases? Why are enteric lesions present in some cases and absent in others, although infection may have taken place through the intestine in both cases? Why may typhoid infection at one time produce a septicemia,—a severe intoxication—without local manifestations, and at another time attack, either alone or in combination, various organs, such as the lungs, kidneys, spleen or cerebro-spinal meninges, without affecting the intestines? Does the effect of the typhoid germ predispose to a mixed infection, and is this not responsible for many of the symptoms that are present in typhoid? Is the bacillus coli-communis, of which, according to Rahlff, there are sixty-two different kinds, capable of becoming pathogenic and producing typhoid symptoms? As it is now known that urine of typhoid cases may contain the germs for many months, is not the public health greatly endangered by this fact, and should not the urine be disinfected as a sanitary precaution, while any germs remain in the system?

Much yet remains to be known of the life and internal structure of bacteria. As by nature they are usually colorless, it is quite probable that they are greatly altered in structure by the staining process. At present our text-books teach that the bacterium is devoid of a nucleus. Still, Gruber, Klebs, Nussbaum, Balbini and others, have shown that "the nucleus is an element essential to the life of the cell," or is the "focul seat of life in all its forms." Butschli believes that the bacterium consists almost entirely of a nucleus. From this we observe that much still remains to be known about the structure of the bacteria.

There still remain many problems in infection, immunity, etc. We have yet to learn how infection may lead to structural complications and how normal bacteria become abnormal in growth and character. We know that healthy tissues resist microbic attacks, while enfeebled tissues are predisposed to microbic action. The want of vital energy or defective nutrition makes the tissues a receptive soil for bacilli and causes infection. Infection depends largely upon the pathogenic

power of the germ, and upon the amount of cell resistance. The condition of the vital forces, therefore, largely decides the action or effect of the germ. For example, a person of a strong constitution and in good health, can meet disease on a war footing, and nine times out of ten repulse it. It is said that "the microbe trembles when he sees a body cheerful and at ease."

It would seem, therefore, that immunity was due to increased vital force, but such is not the fact in all cases. The very nature of immunity is still an unsolved riddle, for no general or satisfactory law of immunity has as yet been formulated. For example, why are the infectious diseases mild in some cases and virulent in others, and why are the warm-blooded animals immune to most of these diseases? Why are children immune to certain diseases of adult life, and adults immune to certain diseases of childhood? Why is natural immunity peculiar to some species, races or individuals? We know that artificial immunity is secured by attacks of disease ending in recovery, by vaccination, by treatment with sterilized cultures of germs, and by treating a susceptible animal with the blood serum of an immune animal, etc., but we do not know how the immunizing effect is produced. Is artificial immunity, and the cure of infectious diseases, due to the combination of enzymes with organic albuminoids?

Ehrlich believes that the specific diseases caused by toxins are produced in those individuals whose living cells or tissues possess a substance which has a chemical affinity for the toxin, and when this substance passes from the tissues into the blood it becomes a protecting and curing substance. Buchner says that immunity is caused by "reactive changes" in the fixed tissue cells, after which they are not again susceptible to the action of the same organisms. There seems to be a retention of some bacterial products in the tissues. Others attribute immunity to phagocytosis; to the germicidal powers of the blood serum; to the bactericidal properties of the proteids; to the exhaustion of the pubulum by the germs, etc. Metschnikoff claims that immunity is due to phagocytosis. Dr. William Carter, in 1893, showed that normal blood serum is a powerful and active therapeutic force, with globucidal and germicidal properties. Vaughn, Hankin and others believe that the nuclein in the blood, which is derived from the white corpuscles, has decided germicidal and immunizing properties. Others believe that the first attack of an infectious disease exhausts the pabulum or nourishment in the blood or tissues

on which the germs feed, or produces such cellular or chemical changes that the germs die and the disease terminates. This pabulum having once been exhausted, and the cells of the organism having adapted themselves to this change or been modified by it, is the supposed cause of future immunity.

Vaccination with a mitigated virus seems to habituate the phagocytes or tissue cells to the poison, and thus produce immunity, but according to the recent reports of the British Royal Commission, protection is relative, not absolute—temporary, not permanent. How sterilized cultures of germs and antitoxins produce immunity we do not know. The antitoxins seem to be secreted by the cells of the organism and to combat the toxins secreted by the germs. Whether the antitoxic serum acts biologically or chemically we do not know. It may stimulate cellular resistance, or it may act chemically by checking germ growths or by neutralizing their action on the toxin.

According to Behring and Kitasato, the antitoxins aid the tissue cells in resisting the action of the germ and its poison and do not neutralize or destroy them. The germs that produce alcoholic fermentation give rise to chemical products which ultimately check fermentation. Is self-limitation, in certain diseases, due to chemical products that have been produced by the germs of the disease? Disease is not limited by any period of the life history of the germ, for with suitable pabulum and proper conditions germs will multiply and reproduce themselves indefinitely. Is self-limitation to disease due, therefore, to exhaustion of the elements on which the germs feed, to modification of the tissues or to chemical products? In some infectious diseases, like diphtheria, erysipelas and tetanus, the germs may develop in only a small portion of the body; hence, the nourishment for the germs has not been exhausted and one attack does not immunize against another.

There is a distinction, therefore, between self-limitation and immunity. Why is it that in some infectious diseases, like scarlatina, typhoid fever, small-pox and measles, there is self-limitation and immunity to subsequent attacks, while in others, like pneumonia, erysipelas and diphtheria, there is self-limitation but practically no immunity? How can we produce artificial immunity to diseases where the natural processes of disease do not afford immunity? For example, tuberculosis in its natural process does not seem to furnish the agents for self-limitation or immunity; hence, how can we ever

establish these artificially except, possibly, by injecting antagonistic germs or the serum of animals naturally immune, or by some other process yet undiscovered. As one disease may prevent the contraction of another by means of the antagonism of germs, it may be possible, by injecting antagonistic germs, to cure many diseases, as anthrax is cured by injecting themicrococcus prodigiosis.

Natural immunity seems to be due to the condition of the blood. Can we, therefore, transfuse the nature of an immune animal, by blood transfusion, to the individual? A greater or more accurate knowledge of the cause or causes of immunity will enable us the better to secure artificial immunity. When we know how the tissues themselves combat infection, we may be able to aid them in their work. When we know more about the chemical and physical changes that go on in the cells during elimination and absorption, we will have far greater powers of combating disease. Along this line many great discoveries still undoubtedly await us. If the germ products that cause toxic symptoms also cause self-limitation and immunity by isolating the various chemical elements produced by the germs, could we not ascertain which of the chemical elements produced the harm, which self-limitation and which immunity? If we could ascertain this, we might then secure from artificial cultures or the serum, only the immunizing elements, and thus ascertain the relative merits of the chemical product and the living virus. We know but little about immunity and there remains much to be learned about the biochemistry, poison, etc., of micro-organisms and their products.

We do not know why it is that in people of apparent health we so often find the diphtheria bacilli in the throat, the pneumococci in the blood, the tubercle bacilli in the lungs, and many other pathogenic species almost constantly distributed throughout the organisms without producing disease. Montesano tells us that the tetanus bacillus and toxin have been found in large numbers in the nerve centres without producing their characteristic lethal effects. It appears that microbes, *per se*, are usually inoffensive. It is the condition of the germ, aided by physical conditions, that makes it virulent, rather than the germ itself. Even the so-called pathogenic bacteria are not always guilty of homicidal intent. The diphtheria, typhoid, cholera and other pathogenic bacilli are widely spread in nature—are almost universal—but it is only when they become diseased or virulent that they become dangerous. What causes the diseased or virulent

condition of the germ or what makes them at one time pathogenic and at another time not, we do not know. The contact of the germ with an organism of lowered vitality seems to cause the germ to become pathogenic or diseased. The virulence of a germ depends upon its neutritive and reproductive activities, and these are greatly increased when the germ is developed in a highly susceptible individual, and usually diminished when the germ is artificially cultivated. While in a pathogenic condition it seems to secrete or excrete poisonous products which are most harmful to the organisms.

How to prevent germs, therefore, from becoming virulent is one of the problems that now confronts bacteriologists. We must more thoroughly understand the natural history of bacteria. We must study them individually and not in groups. When we more fully understand the structure and life history of the pathogenic bacteria, we will undoubtedly be able to prevent bacteria from becoming pathogenic. Then antisepsis and serum-therapy will have vanished and become a landmark of the past. As we, through observation and research, more and more understand the objects and forces of nature we will preside over them, while fate and limitation recede into the dim past. We will then, possibly, be able to convert the parasites—the degenerates of microbian society—to a better mode of life and of activity, and we will more thoroughly understand and appreciate the beneficial effects of the saprophytes.

We observe, therefore, that microbes have power for good or for evil, the same as all forces in nature. The good may become bad, and the bad may become good. How to civilize and Christianize the microbes so that they become harmless, if not beneficial to humanity, is a problem for the future. Many microbes are benefactors to humanity, and when rightly understood and managed. they become friends, and life itself depends largely upon them. Schulze, Schwann, Pasteur and many others believed that the fermentation that gives rise to bread, vinegar, wine, beer, etc., was due to micro-organisms. Recently Professor Buchner has declared that "fermentation is not a physiological process, but is caused by the substance called zymose," which is a chemical product of the growth of yeast cells.

Most germ diseases are caused by the poisons generated by the cells. Is it not most probable, therefore, that fermentation is due to yeast juice rather than to yeast cells. Some germs convert starch into cellulose, and some germs, in the soil, greatly aid plant life by

forming nitrous and nitric acid, ammonia, phosphorus, etc. Some color milk blue, and others transform the white snow of the Alps into scarlet. The phosphoresence of sea water, etc., is due to microbes. Many colors, aromas and flavors, are due to bacteria, as in butter, cheese, etc. Dr. Johann Olsen, of Norway, by bacteriological methods, has produced the various textures and flavors of the different varieties of cheese. Certain microbes, and combinations of microbes, produce certain flavors. With the microbe, corresponding to the flavor desired, he inoculated a sterilized cheese, and thus secured the texture and flavor desired. Kahn has made a science out of butter making, and Hansen produces the various kinds of beer from various kinds of yeast of his own production.

Many industrial processes depend for their success on bacterial fermentation. Alzares has discovered a bacillus that "converts a sterilized decoction of indigo plant into indigo sugar and indigo white," the latter then oxidizing to form the valuable blue dye. The proper preparation of tobacco leaves, and of tea, depends on the right amount of fermentation,—the same is true of ensilage. Flax and hemp are steeped in a water containing a certain bacteria, which so acts on the plant as to aid in separating the choicest fibres. Bacteria also aids in the tanning process, and are many ways useful in the arts. We observe, therefore, that although bacteria are essential factors in many diseases, that nevertheless they are for the most part harmless, and may render a beneficent and important service to mankind. They are highly useful as scavengers and ferments, and do much towards keeping the world sweet and clean. Kijanizin, of the University of Kieff, says that many kinds of intestinal bacteria, by acting as ferments, aid digestion. They decompose and peptonize the nitrogenous matter and thus aid in the absorption of food.

From Schottlin's experiments upon chickens it appears that microbes are, at an early period of life, essential to digestion, and at a later period an aid to digestion. It is also true that other intestinal bacteria cause disorders of digestion, by causing decomposition of food and the production of various poisonous substances, which irritate the stomach, poison the system and give rise to numerous symptoms. Some microbes are poisoners, murderers, vandals and even incendiaries. According to M. Jean de Loverdo, there are incendiary microbes,—the thermo-philes—which are responsible for the so-called cases of spontaneous combustion. Microbes are thus bene-

ficial and harmful, useful and useless. It is the problem of the future to ascertain the exact structure, composition and nature of microbes, so as to convert them to the highest use. The pathogenic microbial savages, with homicidal intent, must have their environments and nature modified or changed, so as to become harmless if not beneficent. The microbe, it is true, is a great factor in evolution, and more thoroughly respects the doctrine of the survival of the fittest than any other agency or cause, It selects the weak and unfit, and as it is not in harmony or sympathy with altruistic sentiments, it usually destroys them. The simplest form of living matter—the cell, microbe or micro-organism—is endowed, as we are told, with psychic life. Can we, therefore, bring psychical influences to bear upon micro-organisms, so as to modify their nature and make them more humane and altruistic in their sentiments towards humanity.

This suggestion may seem like pleasantry, and is undoubtedly impracticable. Still, Bunge, Gruber, Verworn, Mœbius, Balbiani, Binet and others, believe that in both vegetable and animal organisms we find manifestations of an intelligence which greatly transcends the phenomena of cellular irritability. They believe "that a psychologic life begins with living protoplasm," for the phenomena of life obey much more complicated laws than any really physico-chemical phenomena, or phenomena due to cellular irritability. Life emanates but from one source, and wherever there is life there is design, intelligence, the power of choice, and other psychic manifestations. "The same desires," says Montaigne, "stir mite and elephant alike. The psychic life of the bee is as complex as that of the whale." The varied movement, caprices and frolics of micro-organisms,—their selection and method of seizing and appropriating food, all indicate psychical faculties. According to Ehrenberg, Pouchet, Kunstler, Lachmann and others, some micro-organisms possess organs of sight, hearing, and of touch, and manifest surprise and fear. Some micro-organisms are herbivorous, and others carnivorous. There is not only selection of the food, but there is sexual selection.

We observe, therefore, that all psychical and vital phenomena are present in micro-organisms; but if such were not the case we would have to assume that they were "superadded in the course of evolution, in proportion as an organism grows more perfect and complex." All life originates from a minute point of matter called a cell. Human life first starts from the union of a sperm-cell with a germ-

cell. These cells live as minute organisms, independent of the individual from which they originate. They possess vitality and psychic life. The sperm-cell or spermatozoid has organs of locomotion, and in obedience to a kind of inate instinct that is intelligent and volitional, it seeks the ovule and, according to Binet, "is animated by the same sexual instincts that directs the parent organism towards its female." The ovule throws out a minute protuberance called the cone of attraction, on which the head of the spermatozoid fastens itself and is then drawn into the interior of the ovule, and by the union or fusion a more complicated cell is formed, which begins that strange process of evolution or development by which cell is added to cell and part to part, until a most wonderful and complex organism is produced. If the sperm-cell did not possess psychic life, how could a father transmit his form, features, disposition and peculiarities to his child?

The same is true, also, of the germ-cell, which represents the psychic life of the mother. Is it not plain, therefore, that psychic life can and does exist in a single cell or micro-organism? The whole possibilities of man—his form, features and every faculty and endowment, exists as a latent potential in the original germ. A study of the life, habits and peculiarities of the individual germ—its psychic life—may lead us to discover the cause of its virulence or pathogenic condition and enable us to convert a bad germ into a good one or a useless into a useful one.

In this age of psychic research, may this not be a problem for the future? Dr. Barraduc, of France, claims to have succeeded in photographing certain emanations from the human body, and of having caught the human soul itself on his sensitive plates. At Munich he exhibited no less than four hundred photographs of this kind. He also claims to have secured "photographs of familiar spirits, and the like," and in the near future will undoubtedly discover the shape of an odor, the length of an emotion and the color of thought. When all this is accomplished, some psychological genius may be able to hold communion with the lower organisms, and interpret aright their psychic life. If there is to be progress and new discoveries, in the future, there must be, as in the past, scientific daring and the spirit of adventure.

This spirit of inquiry, research and daring, has given us in the last ten years many new and sensational discoveries, in mechanics and

physics, such as the modern bicycle, horseless carriages, electric railways, polyphase currents, the Laval steam turbine, the interior combustion motor, calcium carbide, the cinematograph, the Rœntgen rays, liquid air, hydrogen and other gases, color photography, wireless telegraphy, cold light, high frequency currents, etc. There seems to be no limit to future possibilities, hence the prospect for the future is the brightest. The skiograph may foreshadow the invention of a dolor-meter to measure the amount of pain, and other similar inventions. We may then have some delicate instruments to measure thought, emotion, etc. We may then use liquid air to furnish pure air for our hospitals, to reduce the temperature in fever wards, in the tropics, etc. We may then convert bacteria to some useful purpose. N. P. Melnikoff has already constructed an engine which depends for its motive power upon the fermentation of bacteria and the presence of the gas generated. In the future we may regulate sex by the quality and quantity of the food digested. In the future, hypnotism and all forms of occultism will be less mysterious and more useful.

Scientific investigation has done much to clear hypnotism of its mysticism, and the explanation of the duality of mind has given to hypnotic suggestion a therapeutic application. Through physical and psychical research, all forms of occultism are being placed on a more rational basis, and in the future the relation of the mind and body will be more thoroughly understood. At the present time it is believed that the germs of certain diseases are too small to be revealed by even the compound microscope, with the best immersion objective, —for any germ much smaller than the influenza bacillus could not be recognized by the microscope. An improvement in our microscopes might reveal to us the germs of all our infectious diseases, and teach us the true etiological importance of germs, as a factor in disease. The limitations of the microscope may prevent us from ascertaining many mysteries that reside in the living cell and germ. Can we ever so increase the powers of the microscope so as to determine the mysteries of life and the secrets of death?

Will we not, in the future, so strengthen the cell that it can withstand the invasion of pathogenic bacteria? A greater knowledge of the pabulum, on which bacteria feed, may cause such an improvement in the living culture media as to enable us to cultivate the pathogenic bacteria, and to isolate and study them more effectively. The normal blood serum, especially in the naturally immune, holds in solution

chemical substances or specific antitoxins, which are manufactured by the cells of the organisms. In the future the art of serum-therapeutics will be to obtain this immunizing product. Possibly chemistry may yet discover the antidote for the poisons generated within the human system, – some drug that is innocuous to the patient and destructive to the germ. It is highly probable that, in the near future, the effective serums and antitoxines may ultimately banish infection.

With a fuller knowledge of natural and acquired immunity we will undoubtedly be able to prevent all contagious diseases as we are now able to prevent a few by inoculation. "By a process of vaccination or immunization it may soon be possible," says Pasteur, "for man to eradicate every contagious disease from off the face of the earth." At present, therefore, clinical medicine should seek protection from all toxic agents and immunity from diseases. May we not, in the future, so understand the secrets of life and the cause of disease as to secure to each individual a limited immortality? Then the patient may beseech the doctor to let him die instead of keeping him so long in this vale of tears. We will then quarantine the mosquitoes and flies, so that they will not spread disease. The scientific spirit will eventually overcome the commercial and mercenary spirit of the age which foists upon us germ juices and specifics. *ad nauseam*, and the mad rush after every fad and fancy, every novelty, will cease. Commercial houses will no longer lord it over the medical profession. They will supply the demand and no longer create it. Honest seekers after truth, observers, experimenters, will then advance the science of medicine.

There will then be less credulity and more judgment, and the bewildering and disgusting multiplications of so-called remedies, which, like the Dutchman's razor, are made to sell, will no longer depend upon the testimonials of the credulous and ignorant. Dr. Elmer Lee says that "in some future day it is certain that drugs and chemicals will form no part of a scientific therapy." No one will then enter the medical profession except from a pure love of humanity, a love of science and self-abnegation. The medical prospects for the future are inspiring, for the doctor is becoming more and more a self-sacrificing altruist and seeks prevention, rather than cure. Increased knowledge of the cause of disease has so greatly increased our powers of prevention that the future for humanity promises to be far freer of disease, far healthier and far happier.

ESSAY.

BY HENRY CHAVANNE, M.D., SALEM, N. J.

DOES MEDICINE CURE?

When it was suggested to the author to read a paper before this Society, he appreciated the improbability of presenting anything new; the idium of a writer being comparatively all that can be claimed as original. Hence, in offering this for your criticism, the author was not unmindful of the paradoxical caption used as an introduction. Its relevance is, to borrow from Scott, "Medicine in its most obvious phase." The limit given is responsible for the dictation and paragraph feature of this production.

Applied medicine is a matter not appreciated by all alike, though taught in the same school; therefore, a general acceptation of any dictum should not be expected nor will cure be defined alike by all. With some, no doubt, it will be given a general application, though irrational.

A cure, a remedy, an anodyne to the laymen are synonymous; how considered by the professional is not questioned; to deny that specific medicine has not eradicated disease is to infer non-experience; to have dispensed the same without prescribed result does not affect the record until it is undeniably proven that the patient would not have gotten well with treatment consultare.

Medicine is more often a remedy than a cure, *e. g.*, a means to an end, as an ante, anti, anto and the numerous prefixes indicate in that sense a remedy is a conservant of health. Confidence is a quality requisite in the labor of a physician and only acquired by experience; therefore, it becomes the practicing physician to let those who are chasing bacilli, as entomologists do bugs, catch their game and prove the species before adopting their theories. This is not refutation, for such authorities as Loeffler, and others of like reputation, tell that bacilli are found where the disease of which they are presumed to be

specific had not been known in one instance for years. If putrefaction did not supervene, the blow-fly would go out of business; likewise, the bacillus needs soil compatible to display his efficacy.

A contention of today is the virtue of antitoxin serum. Statistics are brought forward by its advocates to sustain its reputed merits; vituperative contradictions and reports are freely used by those of unbelief or disappointed in results of trial. Suffice it for this article if the author simply states that the maxim—"prove all things and hold fast to that which is good"—is one of the truths that control his professional life, and that during the years '96 and '97, while diphtheria prevailed in the City of Salem, there were evidences convincing that the practicing physician must gather knowledge of diseases by a comparative pathology of his own, untrammeled by theories. The experience of that winter is so emphatic that if ninety-nine per cent. of the physicians of New Jersey condemn antitoxin, if obtainable, it will be used by him.

In view of the earnest search and research proceeding in all science pertaining to or associated with medicine, and the accumulation of products, preparations and formulæ, vegetable, mineral and animal, resulting, medicine has become an Eldorado and experiment *vs.* experience.

The printer is plied, so is the doctor. The spirit of discussion and dispute is engendered; the press is supplied with sweet morsels of gossip; the laymen reason, if doctors disagree who will decide? Meanwhile he refers his ills to the druggist, who provides him with "something just as good." When inquisitiveness displaces inquiry, the doctor learns much that is not derived by reading all that comes to him as medical literature.

Believe that this is pure criticism, not disparagement, when the writer says that to dispense medicine under any circumstance and depend on nature and the drugs for results by an occult science is neither rational or scientific; a definite result may be expected of any drug or preparation applied, if carried to the physiological compatibility considered.

Compatibility is not of therapeutics only; there is importance in assimilation. Errors are made in dosage, time, condition, idiosyncracy, etc., and consequence, not result, follows errors.

Thus we have illustrated the law of cause and effect; the physician and disappointment. The treatment of dipsomania, in the writer's

opinion, is an example of what constitutes a cure; and the fact that a large percentage of those discharged as cured return to their desire, as "a dog returns to his vomit," does not indicate failure of therapeutics; only that no cure, has been found for idiots, fools and egots. If authentic history could be obtained at all times, the axiomatic expression would be verified that God never makes a fool; raw material is provided and can be formed to fancy.

The past and present history of medicine is ours to profit by, be indifferent to or skeptical of; acquisitiveness (pardon the expression —not kleptomania) is the pioneer of our cult; where the bump is undeveloped there is a doubting follower believing little, proving less. What is yet attainable in the science is not in the mind of man, and when all is known of medicine, death will continue to claim the sage and numskull, for man changes but little regardless of special selections.

There is a rationalism in medicine that prefers theory to problem, and the author was conceited enough to think he appreciated it; and when, by exceptional experience, he was led to obtain qualifications to practice, he decided to enter the ranks of the regular so-called school. With the sheepskin (pseudo) and code of ethics, the "Pleb" became a patrician, and to be ethical in the strict sense of the term was the desire of the promoted; but the servant could not be greater than the master (mind). Observation imparted much that was not taught in the lecture-room or clinic.

A few years hence, commenting to a druggist on dispensing over the counter, elicited this response: "Doctor, you are too scientific; these patients want relief at once, and will have it; when the sequela occurs they will go to you for treatment." As by the stroke of a knife, a mind was loosed; the influence that had continued to lead controlled no more; relief of patients' distress became the basis of treatment; the dispensatory medicine case and doctor became closer companions; revelations continually occurred; former reference books were less closely relied on; the individuality of each drug begun to assert itself and was used because of what was known, rather than written of it; many members of the doctor's armamentarium became closer friends because of increasing service rendered, and no doubt that all combined, encouraged the production of this paper.

In conclusion, whatever other impression is left by this paper, may it be understood that the writer is a believer in curative medicine; and

that until science gives us a means to produce a shadowgraph of predisposition, our pessimist brother will continue to inquire, and we of the sanguine type will strive to attain to the position of De Quincy's druggist.

ESSAY.

BY DAVID WARMAN, M.D., TRENTON, N. J.

QUACKERY IN THE REGULAR PROFESSION.

It is a matter of deep interest to the student of medical science to search the records of early medical history—its truths, its laws, its fallacies and its delusions—and compare them with those of the present age. In this examination we are most forcibly impressed with the grossly empirical delusions in the early history of the healing art.

Scarcely had medicine been studied as a science, when then, as now, the empiric entered the field, not for the purpose of investigating and applying truths, but to delude and deceive with the most absurd hypothesis and gross falsifications. But it is not my object or purpose on this occasion to read a homily on medical delusion, either ancient or modern, but rather to notice some of the quackeries, or, to use a more agreeable term, violations of medical etiquette or ethics, too often practiced by members of the regular profession, thereby lowering the dignity and self-respect of the practitioner, as well as bringing into disrepute the whole medical profession.

First, we propose to notice some of the quackeries of the regular profession in his daily routine of practice. The physician should never, if the disease be of any importance, relinquish a well-formed medical opinion to that of a nurse or anyone else outside of the regular profession. Due regard should be given to the opinions of others, and they may be held for consideration; but never should they supplant a well-grounded medical opinion, based upon a well-formed diagnosis. No outside suggestions should be allowed to supersede such well-formed opinion, however strong the outside pressure may be. I am aware we are often accosted by our patients in this wise: "I cannot take this, and I cannot bear that; will not something else do as well?" "Will not some beef tea do in place of a cathartic?" or "Hot flannels instead of a blister?" etc.

We answer, no physician should for a single moment give heed to

such interrogatories, if they conflict with his own views and endanger in the slightest degree the safety of his patient. The moment a physician recognizes outside suggestions in place of his own convictions, he ceases to be the advisor and becomes the advised, and thereby belittles himself and degrades the profession.

It is related of the celebrated "Dr. Physick," of Philadelphia, that in the early part of his practice he was called to a sick lady of distinction, and after a careful examination, he proposed bleeding. Oh, no! She could not be bled; would not something else do as well? The doctor answered, that in his opinion, nothing would. Well, she could not be bled! The doctor took his hat, and remarked as he left: "Madam, you had better call some physician in whom you have confidence." Had he succumbed to her wish and played the quack, he would have retained his patient, but he preferred to be the physician. How many of the physicians of the present day would act the part of "Dr. Physick?" Again, public opinion has a very decided influence upon medical practice.

Every physician desires to be popular, and hence is in danger of seeking the applause of the populace, rather than the welfare of his patients. Is not the profession, at the present time, often restrained from the use of active remedies, clearly indicated in acute inflammatory diseases, on account of popular sentiment? This alone, in my opinion, accounts for the success and popularity of the so-called "Homœopathic System." I am not sure that we do not live in an age when matters pertaining to medicine are not shaped and expounded by popular prejudice and not by the profession. But it is averred that diseases have changed in their character, and that many are self-limited, and that they are less inflammatory in their nature.

Admit all this, if you please. Yet, pleurisy is inflammation of the pleura, and pneumonitis is inflammation of the lungs. Not many years ago there was but one opinion in the profession with regard to the treatment of many acute inflammations, but we are assured that active treatment debilitates the patient. Debility is the elephant in our way now. Is it not easy to remove the debility in most cases when the disease is overcome? What care you for debility when you have overcome and removed the disease in all inflammatory diseases? But methinks I hear some one enquire, what are we to do in such cases? I answer, be men! Have decision of character; abide by what is right. Do not turn nurse, apothecary or quack and allow either of them to

take your place, but in all cases and under all circumstances answer correctly the indications of disease, regardless alike of non-medical advice, or the dictation of individuals or pressure of public opinion.

Another form of quackery appears under the head of specialist. Fashion is no more tyrannical in dress than in disease, and its medical treatment follows in her train with great facility. Some medical gentleman, with great avidity, seizes the signs of the times and advertises that he is prepared to cure the latest fashionable disease in the most approved and fashionable manner. He may be an ignoramus in relation to this or any other disease—quite likely he is, but he has entered the lists, he has gotten into the field in advance, he has advertised as a specialist, and his office is crowded with patients and he is ready to receive them, and deceive them also. Not many years ago it was fashionable for ladies to be afflicted with real or imaginary ulceration of the os-uteri and prolapsus uteri, and they must have a specialist to treat them. The family physician, no matter how eminent in his profession, was of no account; his advice was nothing; it must be a doctor who advertised or a female one that had special knowledge of this particular organ and its diseases. Liberties, in way of examinations and otherwise, are permitted the specialist, which are not allowed the family physician, because he (the specialist) deems them necessary to cure the disease. However, I want it understood that I am not decrying the honorable worthy specialist.

Another species of quackery is often practised by misrepresenting the severity of disease, in order to create the impression that marvelous cures have been effected. Some physicians always have very sick patients, but they generally recover. Even in the simplest disease they put on a very long face and very wise expression and prognosticate that this is a very, very doubtful case and needs the utmost care and attention. This may be a very well-arranged ruse for the physician, but quite a different affair for the patient. It may not always be wise to apprise the patient of his real condition, but the friends of the patient have a right to know the whole truth, and the physician who misrepresents or exaggerates a disease, and thus produces unnecessary alarm on the part of friends and increases the danger of the patient for the purpose of creating the belief that he produces marvelous cures, has no apology for his misrepresentations. It is downright quackery!

So, also, of him who misnames disease for the purpose of making

it appear that he cures almost incurable diseases. As, for example, calling simple varioloid confluent small-pox; or ordinary quinsy or bronchitis, diphtheria; or benign tumors, cancer. But this is not an innocent deception to the patient and his friends, if it be on the part of the medical attendant. Any alarm, especially if it be unnecessary, is entirely without excuse on the part of the physician. It creates an unnecessary anxiety on the part of friends and upon the patient himself, despondency and depression of mental, moral and physical energies which greatly retard recovery and not unfrequently accelerate, if they do not produce a fatal termination. There is a grave responsibility resting upon the physician who misrepresents either the name, nature or gravity of disease for the purpose of getting the reputation of effecting wonderful cures. It may be sport to him, but death to his patient. It is practicing deception for the purpose of gain and, therefore, the very essence of quackery!

We now pass to quackery in consultations. The object of a consultation is to benefit the patient, and not to bolster up the attending physician or to supplant him by chicanery, insinuation or legerdemain. The consulting physician should thoroughly examine the patient and, after a conference with the attending physician, agree upon a course of treatment which, in their united judgment, will be most beneficial to the patient, and, in case of disagreement, a third party should be called in. If the treatment pursued by the attending physician be correct a magnanimous mind will agree to it and suggest no change; if not, such changes will be suggested as can be accounted for upon rational principles.

But is this always done? Do we not often see consulting physicians differing in diagnosis, prognosis and treatment—one or all of them —when it is but too apparent that it is done, not to benefit the patient, but because he thinks it necessary to satisfy the patient and his friends, and at the same time make an exhibition of his superior skill for his especial benefit? Hence, inert prescriptions or distinctions where there is no difference, evidently for the purpose of change only. I have an anecdote illustrative of this practice: A consulting physician was called in the absence of the regular attendant, and instead of waiting or leaving a sealed opinion (one of which should have been done), he examined the patient, condemned the practice, changed the treatment and left. In due time the attending physician arrived, was informed of what had been done, examined the medicine

and remarked that "it was quite as well to eat the devil as drink his broth." He (the consulting physician) had condemned opium and substituted laudanum. To a non-professional eye here was quite a a change—a fluid for solid, drops for pills. Now, we submit that all such cases are exhibitions of downright quackery and in violation of all medical etiquette and ethics, and yet, we fear, are quite too frequent.

But we stop not here. There is a species of quackery practiced by inuendo implication and sometimes by silence, more subtle and therefore more detestable. It is not looked for or expected, and hence there is danger of its work being accomplished before one is aware of it. It is sometimes expressed by inuendo to a third party in this way: "I do not wish to say much about the case, but the patient would certainly have died under that kind of treatment." Or that opium or calomel, or whatever else the attending physician was administering, was entirely wrong, and that he either mistook the disease or the treatment. The same is sometimes done by insinuation. The consulting physician remarks, at the same time shaking his head ominously, "It is a great pity I had not been called sooner. I will do all that can be done, but at this late hour the result is very doubtful. A great deal of very valuable time has been lost."

There is another form of quackery, where not a word is spoken, more reprehensible than either of those to which allusion has been made. Not a word has been spoken and yet, to close observers, the intent cannot be mistaken. It is one of those cases in which actions speak louder than words. The attending physician may be unaware of the real object, but it is most effectual to his injury, and thus the intention of the performer is effected. It is done by searching for a disease that does not exist. To illustrate: A physician is called in consultation to see a patient where disease is perfectly apparent. There can be no mistake so far as the disease is concerned; that matter is settled. Take, for instance, a well-marked case of dysentery. He sits down by the side of the patient and begins by enquiring about disease of the brain, and after a long routine of very learned interrogatories he passes to the chest, and with stethoscope and thermometer in hand—for display is one important agent in carrying out this farce—he goes through with the whole routine of auscultation and percussion and of ascertaining the temperature, and then very sagely remarks that he is unable to detect disease in the head or chest.

Of course, he has found none. No one expected he would, nor did he expect it himself. Why, then, all this useless manipulation? To make the patient believe that his case had never before been properly examined and that there had been neglect or a want of proper investigation on the part of the attending physician, and to create, if possible, in his own superior knowledge of disease and power of investigation. After all this tedious and unnecessary process he very gravely recommends a little chamomile tea or camphor water, or some other equally inert substance. But he is sure to suggest some change, else the farce would not be fully carried out. With a certain class of patients this system of quackery is as transparent as crystal, but with others it passes, as was intended, for superior knowledge. I once heard a lady remark that she "was a fortnight recovering from one of these unnecessary thumpings." She saw through the whole thing at once. Another lady preferred Dr. A. to Dr. B. because she heard Dr. A. ask a lady, the day after confinement, if she had micturated, while Dr. B. omitted to ask the question. But whatever may be the conviction of the patient, the object of the physician cannot be mistaken. There is no field in which members of the regular profession so often violate the code as in their consultations with irregular practitioners, and especially with homœopaths. This they do openly and without disguise and with a perfect knowledge of what they are doing. Nor do they presume to make any apology for this violation of medical ethics.

It is becoming a matter of everyday occurrence. One member may quiet his conscience by saying "If I do not consult, someone else will, and I may as well do it and take the fee as another." A second will tell you "he does not consult, he merely visits the patient in connection with a quack, but does not consult with him." Oh, no! He ignores him entirely! As if this could be done, both being present.

But are we not aware how far this doctrine will carry us? We may justify any violation of honorable conduct, and even the commission of crime under this guise. The abortionist has the same plea. The applicant is determined to have an abortion produced, and if one will not do it she will find another who will. The most deleterious consequences arise from such consultations, and are made apparent in the character and support they give to this species of quackery—it makes it respectable and degrades us. The "quack" is sure to spread it broadcast that he has met Dr. B., Dr. C. or Dr. Somebodyelse, in consultation. He means that the public shall know that these men

are on consulting terms with him, and that he is in just as good standing as they. The course that some members of the profession are pursuing justifies him in the position he has assumed, and the result is to lower the true dignity of legitimate medicine, and drag down the standard of a noble profession on a level with the most arrant quackery.

Every man, when he becomes a member of any organization, knows, or is supposed to know, what the requirements of such society is. If he does not know, the fault is his own and his only. Is he not under an obligation to the society, and to himself, (to say nothing of the moral obligation) to keep his word in good faith? Is he not bound by his voluntary acts to eschew empiricism and all empirical practice? Newspaper advertising is another species of quackery that has become quite too common among the regular profession. This is not confined to any particular set of individuals, but embraces men of high and low degree. Each one who becomes the subject of such notices has the ready excuse for the appearance of such paragraphs—in that he is in no way, directly or indirectly, responsible for the same, and if asked for a reason, generally points to this or that one, older than himself, and better known than he, who are alike victims. There is always some extenuation for the fault of a young practitioner, when those much older are guilty of the same offense. If the younger physician should be brought to an account for having a newspaper item speak of him as being called to such and such a patient, who had met with some trifling or severe injury, for which, with his usual and well-known skill, the sufferer was speedily relieved, etc., etc., now, why should the older one be allowed to escape a satisfactory explanation?

While we are quite willing to allow the probability of an occasional flattering notice appearing in the public prints without the knowledge of the principal, and wholly beyond his control or prevention, we are forced to believe that a great majority require some more satisfactory reason than that usually given; or else, why is it that certain physician's names are always sure to appear in notices of accidents, no matter how trivial, in connection with the published reports in the daily papers?

Every medical man naturally desires a good reputation for learning and skill with the general public, and there is always an honorable and legitimate way of obtaining it. If a medical man delivers some popular or scientific lectures, he honestly labors for a scientific reputation with

too many have gone further in the use of their privileges and in the performance of their duties, and have laid themselves open to the damaging suspicion that too much is done for show and selfish interest.

It has often occurred to us that there is altogether too much said by ourselves about the charity of our profession; that, if the public is not aware that we possess and exercise this virtue, it has certainly been no fault of ours. The public hear so much of our charity that they are beginning to think that they are conferring a favor upon us by giving us an opportunity to exercise our propensity in that respect. It is easily seen that this very contract system encourages an abuse of charity which the medical profession directly abet by the very eagerness with which they serve these so-called charities. Many, no doubt, do so thoughtlessly, but the results are none the less detrimental. The few who may hold these positions as club doctors are, in reality, advancing themselves by damaging the pecuniary interest of others, more especially the young practitioner who is struggling for a livelihood, leaving out of the argument entirely the ethical questions involved.

Then, again, we have the railroad contract physician among us, and there is really very little difference between those and the regular club doctors. In both cases we lend our professional services for the purpose of making both dishonest and defrauding the doctor out of legitimate fees. With the railroad companies the injured man has no choice of his medical attendant. He must take the one provided by the company or pay his own bills. In case a suit for damages is instituted he is in the meshes of the railroad company and the injury, whatever it may be, is adjudicated upon by the paid medical attendant of the company, who, of course, is expected to do the best he can for those who employ him. In other words, we, as medical men who hold these positions as contract physicians, aid and abet the railroad companies and mutual benefit societies in making both dishonest and thereby lowering the standard of legitimate medicine. It is no wonder, therefore, that we have so little influence in the community and that as medical men we are so little appreciated. If we continue to farm out our services by the month or year to railroad companies for a mere stipend or the privilege of a free ride, or to mutual benefit societies for a dollar a head a year, we can't expect, neither do we deserve, any better treatment at the hands of the public.

The public estimate us as we estimate ourselves. In view of a state of affairs like those alluded to it is very desirable to so manage our pecuniary relations with the public, and especially with these so-called charities and railroad companies, that we avoid creating the impression on the public mind that the profession and its social organizations are little better than trade unions, having for their chief object mutual pecuniary protection. Our services are not merchandise, and therefore not negotiable. It seems to me that no honorable physician would be willing to accept money unless for services rendered. The practice is wrong in principle, is certainly unprofessional and should be denominated quackery.

Now, in regard to all this irregularity in the regular profession, what should be done to enforce discipline in the light of the code? In some societies there are always individuals who boldly defy the ordinary rules of discipline and still hold good their membership, and again, for fear of offending these parties, certain members of the society decline to take the initiative and the matter goes by default, the offender taking advantage of this delicacy in every covert way imaginable. We are constantly in the way of hearing that this man advertises in the newspapers; that this one is engaged in the Silver Ash or Houston cure as medical director; that this one takes patients from his professional brother; that this one consults with irregular practitioners; that this one takes contracts of various kinds; that this one has been known to misrepresent his cases and this one to peddle falsehood and detraction concerning another, and many other violations of the code. All these offences are known to be intentional and openly committed, and yet, in many of our societies these members hold their places in good and regular standing. In view of these facts, which we all know to be true, can any one acknowledge, taking many of our societies as criterea, that the public as well as the profession is unable to draw the line between the regular and irregular practitioner.

The proper starting point being with the local societies, those identified with the State are perhaps the most available and suitable. When these societies throughout the country guarantee that every member is what he should be, we can then have the means of drawing our line straight. If the members of the society are afraid of offending this or that party or bring charges which they can substantiate, they are not only false to the society to which they belong, false to

the best interests of the profession, but false to their own sense of honor and justice. If we show our power and disposition to decide who are regular and who are quacks and promptly punish every breach of discipline, we could soon bring quackery into disrepute and thereby establish our faith in our admirable code of ethics and in each other. If we cannot do this, why not throw wide open the doors and entirely ignore all codes and rules of etiquette. It might be argued that there are many worthy practitioners who do not belong to any medical society or organization in their vicinity and who are, in consequence, not subject to this special jurisdiction. This must be admitted. There may be reasons peculiar to themselves which prevent them joining and there is no moral law to compel them to act contrary to such convictions.

We believe that it is due from all members of the regular profession, that they should become members of some district or county society and have, thereby, relation to the medical men of the section in which they reside. This consideration seems due from one physician to another, because experience has shown that association has a tendency to maintain the morale and courtesy of the members of any profession. Just so soon as you see the standard of any science elevating itself, or of any art, we see a tendency in its votaries to segregate, not only for discussion but for acquaintance, and we maintain that in all healthful medical advance the same feeling is apparent.

That graduate of regular medicine who is willing to stand aloof from societies in which his brethren are mingling, in almost all cases, is not only withholding his influence from an approved method of our calling, but is lowering his own standard, is encouraging personal exclusiveness and fostering a spirit inimical to the welfare of the body of medicine and its ethical rules. A much better way, generally speaking, would be to overcome any difficulty by becoming a member of such organization, and by failure to do so there is always grave suspicion that something is wrong with the individual, rather than with the society or association, as we do believe that the ethics of our profession is greatly conserved by such associations and that those standing aloof are not as ethical as they should be. When questions of difference arise among us they should be met with that courtesy of debate and forbearance of feeling which belong to us as gentlemen and as physicians.

ESSAY.

BY ALEX. MARCY, JR., M.D., RIVERTON, N. J.

CYCLIC VOMITING IN CHILDREN.

In asking your attention for a short time to the subject of this paper, "Cyclic Vomiting in Children," I offer no apology, for I believe it is a subject of very great importance and one which is not well understood; nor has it had that attention which we would expect for so serious a malady. One reason why it has not received more attention is, I believe, on account of its comparative infrequency, and yet, I also believe that many cases occur the true nature of which are not recognized. The only reference to this disease in our text-books that I have been able to find is in Rotch's "Pediatrics," Holt's "Diseases of Children," and Keating's "Cyclopœdia of Diseases of Children." Fenwick, in his work on "Disorders of Digestion in Infancy and Childhood," speaks of recurrent catarrh of the stomach, and from his description of this disease I suspect that it is probably a description of this same condition.

I have been fortunate, or rather I might say unfortunate, enough to have seen three cases during the past five years occurring in children, and while this disease may occur at any age, it is especially as occurring in children that I wish to confine my remarks. One of these cases was of a mild type, the other two very severe. I will relate the history of these cases briefly and will outline somewhat in detail a typical attack, as witnessed a number of times in each of the severe cases. The history of the mild case was as follows:

B. R., American, female, æt. 6. Well developed; apparently healthy; had had the usual diseases of childhood. She was taken with a severe attack of vomiting, coming on without apparent cause. I found the child very much exhausted from the almost constant emesis, which had been going on for nearly forty-eight hours. She had some fever, temp. 102°, slight pain and tenderness over stomach; tongue dry, very much coated, bowels constipated, urine scanty and high

colored, breath giving off a peculiar odor, respirations sighing and moderately slow. I supposed I was dealing with a catarrhal irritation of the gastric mucous membrane, prescribed what I considered the appropriate remedies, and in a short time she was well. Some months after this I was called to see her again and found the same conditions, only somewhat more severe and lasting two or three days longer. The next attack she had was very severe, and was accompanied with violent and almost constant choreaform movements of the muscles of the face, neck and upper extremities. This attack was speedily relieved by a hyperdermatic injection of morphia and atropia. One other attack, some time after this, also quickly yielded to the morphia and atropia, and she has remained well ever since.

Case 2. A. M., born Aug. 29, 1891. Was a fine, healthy child at birth, weighed ten pounds, perfect, apparently, in every respect. Was nursed at breast until fourteen months old. Up to this time he had never been sick, excepting an attack of whooping-cough when six months old. He was weaned from the breast at fourteen months and put on cow's milk, and as a result of this change in diet, together with the intense emotional disturbances incident thereto, he had a severe attack of gastro-enteritis, complicated with meningitis, which proved very serious. He made, however, a complete recovery from this illness and continued perfectly well until June 12, 1893.

At this time he had his first seizure of vomiting. This was considered an attack of gastric irritation due to acute milk infection, and after a few days he seemed perfectly well. He continued in good health until February, 1894, when he had another seizure, rather more severe than the first, from which, however, he recovered promptly. He had another slight attack in July of same year and then continued well until February, 1896. This seizure was more severe than any of the others, but complete recovery followed in a few days. In March, 1896, he had measles, which was accompanied by an attack of vomiting, and two weeks after this he had another. In May he had a very severe one, in which the symptoms became so very alarming that his recovery seemed very doubtful. He did recover, however, but in July he had another seizure, which was still more severe, if such a thing could be possible, and from which he recovered more slowly.

He continued well until October 8, when he was taken again, and although this time the disease seemed less severe than it had been

before, so far as the vomiting was concerned, yet the evident depression of vital force, the bloody vomitus, the suppression of urine, the extreme exhaustion, all showed but too plainly the intensity of the toxæmia. He died on the 9th, from heart failure. There was an acute nephritis coincident with this attack, as shown by the presence of albumen, blood and casts in the urine.

H. H., female, æt 6 years. Was a strong, healthy, well-developed child at birth. Was nursed at breast until eighteen months old. Development normal in every way. Had very little, if any, sickness until three and one-half years of age. At this time she began to have attacks of vomiting, with fever. They were supposed to be due to indigestion; they came on suddenly, without apparent cause, lasted a short time, and recovery seemed prompt and complete.

In September, 1895, she had an attack which was very severe and which lasted one week; during the course of this she became so thoroughly exhausted that the physician in attendance thought her recovery impossible. She recovered, however, very rapidly, so that in a week after the vomiting ceased she seemed perfectly well. She continued well until August, 1897, when she was taken with another attack, which was even more severe than the former, and which lasted eight days. Her condition was so alarming that her death was momentarily expected. Recovery followed, however, and in February, 1898, she had another severe attack, and while in this condition she was seen by one of Philadelphia's most noted surgeons, who thought she could not recover. He was very positive that she had a diseased appendix, and that her vomiting was caused by it. In the event of her recovery, he wished an opportunity of examining her again. She did recover, and after she had gotten perfectly well, she was taken to him for more thorough examination. After very careful and painstaking efforts, it was pronounced chronic appendicitis, and operation for its removal strongly urged. The operation was performed and the appendix removed. Microscopically, it did not show any very marked evidences of disease. The microscopic study was as follows:

"April 4, 1898.

"Examination as above requested reveals the following:

"Micro. Ap. Length, 8.5 cm.; diameter, 0.8 cm.; weight, three grains; color, pale red. Walls of the organ are slightly increased in thickness, vessels more or less injected The mucous membrane is

swollen and congested. The lumen ranges 0.2 cm. throughout. Lumen contains reddish gray purulent material from which an inoculation was made.

"(Spec. Exam. No. Bac. Coli Com.) On agar slant.

"*Micro. Appearance.*

The lumen of the appendix is in part occupied by a fœcal concretion. There is considerable erosion of the mucous membrane. Mucous glands are here and there hyperplastic; the epithelial cells of the mucous glands are in great part the seat of mucoid degeneration, being occupied by clear semi-translucent, semi-refractive droplets. The lymph follicles are hyperplastic and a few of the cells show slight retrograde metamorphosis in that they stain rather imperfectly; a few of the mucous glands also present similar changes. In the sub-mucosa, and to less extent also in the muscularis and subserosa, there is a moderate amount of round cell infiltration, the blood vessels are distended and filled with blood which presents an excessive number of leucocytes. The blood vessel walls are thickened and exhibit considerable nuclei. The connective tissue of the submucosa is in great part homogeneous and contains relatively few nuclei.

"DR. A. O. Y. KELLY,
" per Y."

After her recovery from the operation she seemed unusually well, gained in weight, had good digestion, regular bowel movements, perfectly clean tongue—conditions which had not existed to the same degree before the appendix was removed. This condition of perfect health continued for so long a time that I had about concluded that the removal of the appendix had, after all, solved the problem in her case. In March, however, ten months after the operation, she had another seizure, and died after an illness lasting nine days, from exhaustion.

As these severe attacks of cyclic vomiting are all so nearly alike, I shall simply attempt to describe a typical one, somewhat in detail, in order that you may get a faint idea of the severity of the disease, and even then, though I might be able to picture it graphically, you will hardly realize what it means, and I am sure, until after you have actually seen it, and watched it closely from hour to hour, as it goes through its various stages, you will have but a very imperfect idea of what it really is.

The first noticeable symptom is loss of appetite, usually a refusal to eat the evening meal; the child seems a little more tired than usual and wants to go to bed; if the observation is made, the tongue will be found slightly coated, the breath a little heavy; the bowels, perhaps, have not moved that day; the urine has increased in quantity; no fever. The sleep is a little more restless than usual. During the night, usually between twelve and two, the child will awaken and complain of feeling sick, and in a very short time begins to vomit. The first matter vomited will be the contents of the stomach, which will consist of particles of food from the day before, with large quanties of mucous. There will be some pain around the umbilicus, and a very pronounced aversion to being examined. Sometimes there will be two or three loose movements from the bowels, during the next few hours, with a copious flow of urine. Usually, however, the bowels are constipated, even obstinately so. The temperature at this time becomes somewhat elevated, and the child grows very restless.

The disease now is well under way, and every few moments the child is vomiting. After the stomach has been emptied of its contents, the vomitus consists of mucus. Then mucus, stained with bile, and finally, a peculiar bronze colored mucus, occasionally containing some blood. Oftentimes there is violent retching, and nothing is ejected. There is intense thirst, and the little patient will beg for water, milk, champagne, etc., and vomit any or all of them as soon as they are swallowed. Anything and everything that is taken into the stomach is almost immediately rejected. At this time there is noticed a peculiar odor given off by the vomited matter, as well as by the breath. This is so characteristic that I could diagnose a case of cyclic vomiting from that alone.

The temperature is now perhaps 103°. The pulse 140 to 160. The respirations irregular and sighing. The urine very much diminished, and peristalsis entirely suspended. The tongue is very much coated; the lips dry and parched. The belly flat. The entire body shrunken in appearance, muscles flabby, skin harsh and dry. You might suppose the child had been ill for weeks instead of hours. There is also at this time great restlessness. The patient goes from one side of the bed to the other, from the head to the foot, rarely still ten minutes at a time. There is practically no sleep. There is a curious intolerance of bed clothing, and not even a sheet will be permitted to remain over them. Although they may be in a sound sleep,

the moment anything is placed over them they will awaken immediately.

This has continued for perhaps forty-eight hours, and the patient is becoming very much exhausted. The pulse is getting alarmingly rapid and weak. The temperature is falling, until it becomes subnormal. The eyes are half-closed, with the balls partly rolled up. The conjunctiva injected. The eyes sunken in their sockets. The whole picture is ghastly. The condition of the patient intensely critical. The physician's anxiety extreme. Still it continues for seventy-two hours, the conditions getting worse. Now the extremities are cold and blue, the peripheral capillary circulation practically suspended. The pulse gets weaker and more rapid, until it becomes impossible to count it. The temperature begins to go up, and in a short time you will find it 105° in the rectum. The respirations get more and more irregular. The restlessness is less pronounced on account of the extreme weakness.

It is now four or five days since the attack began, and you have given up all hope of the patient's recovery. You calmly and sorrowfully await the end, hoping that it may not be far away. At this time you notice that the intervals between the vomiting are longer, and that the little patient seems inclined to sleep somewhat. This becomes more and more evident, until the child finally passes into a profound state of somnolence; this may continue for hours. During this sleep the temperature falls, the hands and feet grow warm, the pulse becomes stronger and less rapid, and when the child awakes you can see very plainly that the crisis has been passed,—the attack is over. The convalescence is marvelously rapid, and in less than a week you would not know that there had been a severe illness at all.

In two of my cases, however, the result was different, although they had both had attacks just as severe as that I have attempted to describe, and recovered. Yet there finally came one from which they did not recover.

Now, what is the nature of this disease, and what its cause? There is very little literature on the subject. A few cases have been reported in the medical journals, and it is mentioned in a few only of the many text-books on the diseases of children. Holt, in his work on "Diseases of Infancy and Childhood," says: "That in cyclic vomiting, it is quite probable that the cause is the accumulation of some toxic agent in the blood, and that the vomiting may be eliminative." He also

says: "That this condition is one which has received but little attention, being classed by some as a gastric neurosis. While at the present time we are not in a position to give it a definite pathology, it seems to be associated with a general derangement of nutrition, which is in some way connected with formation and excretion of uric acid, but it is not certain that all cases have the same origin."

Rotch, in his "Pediatrics," says: "There is no name that can be given to this disease, excepting that of persistent vomiting, as no single definite cause, nor any pathological lesion, has ever been found to produce it. It has not even been shown that it is a primary disturbance of the stomach. In fact, in many cases it is possible that the source of irritation is entirely outside the stomach, and perhaps connected with the great sympathetic ganglia, such as the solar plexus.

"The inciting cause of the vomiting in most cases is obscure, but it is evidently varied. It does not seem to be produced especially by errors of diet, but, on the contrary, occurs in children where diet has been most carefully regulated.

"Undue exposure to cold, fright or excitement, all appear to me to have sometimes an etiological influence on the disease. This form of vomiting may occur at any age. I have met with cases in young infants, and throughout the whole period of childhood. The attacks may occur not only in delicate, nervous children, but also in those who are vigorous."

Pepper, in his article on "Cyclical Vomiting," in *Keating's Cyclopædia of Diseases of Children*, says: "That this disease is not primarily dependent upon diseases of the stomach, either organic or functional, I am convinced, though observers as able as Fenwick describe it as a recurrent catarrh.

"The entire absence of gastric symptoms between the recurrences, and the frequent lack of any reasons for accepting the existence of an inflamed mucous membrane during the attacks, together with the common evidences of derangement of the nervous functions, are to me sufficient proof of its dependence upon influences beyond the stomach, though what these influences are cannot be stated.

"Some cases which have been published under this title, may, perhaps, belong to another class of neurosis of the stomach; they are not improbably examples of periodic hyper-secretion. There are others, however, of which I have seen several examples, in which there was

apparently no abnormality of secretion. For these cases we have no adequate explanation.

"Nervous depression is the rule in the subjects of this affection, and exposure to cold, emotion, or other well-defined causes may bring on attacks, but in what way the result is produced is not known. Leyden's original explanation of the condition as a neurosis of the vagus is attractive, but leaves us in want of knowledge of the nature of the neurosis.

"The vomiting may be eliminative of some ptomaine recently produced or accumulating in the system, and the increased toxicity of the urine, observed by Hunter in one of Holt's cases, is an important support of this view, but the origin of such a possible ptomaine is unknown."

My own belief, after a very careful study of these cases, is, that they are examples of auto-intoxication due to ptomaine poisoning; that this ptomaine is formed in the intestinal canal, and is absorbed into the blood, and we have a toxæmia. The vomiting is produced primarily by the effect of this poison on the nerve centres. The poison is eliminated by the mucous membranes, and the skin. The catarrhal inflammation of the stomach, bowels and kidneys, is a secondary process, and is not present excepting in the severe type of cases.

In support of these views, let me call your attention briefly to some important facts as obtained in the history of the cases that I have seen: First, a study of the urine before an attack shows that it is always increasing in quantity, of high sp. gr. very acid, and containing large amounts of indican. The uric acid, while not in excess, is rarely much below the normal.

During the first few hours of the disease there is but little change in this respect, but gradually the quantity of the urine diminishes, the indican disappears, and acetone in large quantities is found. Acetone is also given off by the breath, and causes a peculiar odor, which is almost pathognomonic. This evidence bears strongly on our first point, that there is auto-intoxication due to ptomaine poisoning. The post-mortem examination of the second fatal case gives us some positive data from which we can derive some of our conclusions.

The examination was made twenty-four hours after death, and the following notes taken: Body of female child, extremely emaciated. Rigor mortis well marked. Thorax opened and revealed well developed heart and lungs, there being marked hypostatic congestion

of the latter. Abdomen opened. Stomach found empty. The mocosa showing marked changes due to inflammatory action. This was especially noticeable at the pyloric extremity. Large areas showed extravisated blood under the mocosa, with apparent softening. This condition was also very marked in the duodenum, in the jejunum and illeum. especially at the illeo-cecal valve, the caput coli and the ascending colon. The glands of the intestinal canal were very prominent, Pyers patches being particularly noticeable. Blood extravisations were also prominently noticeable here. The liver was normal in size, somewhat altered in color and appeared to be fatty. The gall bladder was distended with bile. The spleen pancreas and kidneys were apparently unaltered.

The microscopical appearances are as follows,—this being a copy of the report of Dr. A. O. J. Kelly, the pathologist who examined the specimens :

" *Stomach and Intestines:* There is almost complete neucrosis of the entire mucous membrane of both the stomach and intestine. Most of the eipthelial cells do not stain at all, they being represented by an indistinct granular mass of tissue. A few of them, however, reveal indistinct nuclei, which are without sharp demarcation. In a few places the deeper cells are not so intensely necrosed as the superficial, but in other regions, on the other hand, the neucrosis appears to have invaded the sub-mucous coat. There are slight proliferative changes in the sub-mucous and muscular coats.

" *The Liver:* Microscopically the hepatic lobules are seen the seat of a great collection of clear vacuoles, which are sharply demarcated, and roundish or oval in shape. They are distributed uniformly throughout the acini, are situated within the liver cells, and vary considerably in size. Many of them are very small; others as large or larger than a normal liver cell. Many of the larger ones have evidently resulted from the coalescence of several smaller ones. Corresponding to these in all respects, save that they are translucent and highly refractive, there are a few bodies, very evidently fat. It is fair to assume that the vacuoles have resulted from the extraction of the fat during the processes of preparing for histologic study. The liver cells are distorted in accordance with the size and shape of the contained fat droplets or vacuoles, their protoplasm severely compressed, but still revealing its normal granular appearance. The nuclei of the liver cells are displaced, but stain well. In a very few situations the

interlobular connective tissue appears the seat of some slight proliferation.

"*The Pancreas:* In some of the lobules the outlines of the cells are indistinct, the protoplasm stains diffusely and is hazy, the nuceli stains less than normally and not so sharply. Otherwise there are no deviations from the normal.

"*The Spleen:* There is considerable distention of the blood spaces and here and there more or less diffuse hemorrhagic infiltration. In other situations there is some blood pigment granules between the splenic cells. In some situations, also, many of the pulp cells are indistinct in outline, their nuclei stain indistinctly and not sharply, and the protoplasm stains diffusely and is hazy.

"*The Kidney:* The lining cells of some of the Bowman capsules are proliferated, the capsules rather fuller than normal with proliferated endothelial or other cells. A few of the cells lining the convoluted uriniferous tubles reveal indistinct nuclei and their protoplasm appears abnormally granular. Otherwise there are no deviations from the normal.

"*Anatomical Diagnosis:* Neucrosis of the mucous membrane of the stomach and intestine, fatty infiltration of the liver, slight parenchymatous degeneration of the pancreas, spleen and kidney. In view of the fact that the patient had been dead less than a day when the necropsy was performed, it is not likely that the extensive neucrosis of the mucous membrane of the gastro-intestinal tract is a post-mortem change.

A. J. KELLY."

These changes undoubtedly show a very severe gastro-intestinal inflammation. The elevated temperature of the third or fourth day, the pain and tenderness to the touch, point plainly to an acute inflammatory process.

The first fatal case was perfectly well up to the time of the beginning of the vomiting, which was about 10 P. M. There had been found indican in large amounts in the urine for a week before; in twelve hours after the attack began, the child was vomiting blood, had high temperature and was completely prostrated, although the number of times the vomiting occurred was less than in previous attacks. In twenty-four hours the urine showed albumen, casts and blood, and shortly became entirely suppressed, and in forty-eight

hours death occurred from heart failure, the pulse growing weaker and weaker, until it could not be felt at the wrist. The heart continued to beat for several hours after this, finally stopping in diastole. Unfortunately, no post-mortem was made in this case, but death was undoubtedly caused by the intensity of the toxæmia, as sufficient time had not elapsed for exhaustion to occur.

There is a curious neurotic element in these cases, as shown by the extreme restlessness, the absolute intolerance of bed-clothing, the cold and dusky extremities. There is also an intense puritus after the attack, which I think indicates an attempt at elimination by the skin. The conditions which provoke an attack are varied, but are possibly due, for the most part, to the ingestion of certain kinds of food, coupled with an imperfect intestinal digestion and lowered vital force. Whether the billiary secretions influence the conditions in any way, I am unable to say, but a very noticeable fact observed at the post-mortem was a distended gall bladder. As yet, I have not completed my study of the contained secretions, and cannot say positively that there is anything abnormal about them, but I suspect that there is.

Treatment in these cases is practically useless. The disease is self-limited, and tends to recovery, but oftentimes the patient is exhausted before nature can eliminate all the poison. The more you put in the stomach, the more the vomiting. Predigested food, sedatives and stimulants by the rectum are of doubtful utility, but should always be employed Hot baths and external heat give some comfort and help the skin to eliminate. A small blister applied to the epigastrium sometimes seems to do a little good. Hypodermatic injections of morphia and atropia do control the vomiting some, relieve pain and tend to produce sleep. Hopodermatic injections of strych. stimulate the respiratory centre and tone up the nervous system. Hypodermatic injections of tr. strophanthus or digitalis strengthen the heart.

Normal saline solution, by transfusion, by hypodermo clysis, or entero clysis, offers, I think, the greatest hope of success in the severe type of cases, and I think it should be employed very early after the stomach and bowels have been thoroughly cleansed of any retained undigested food or fœcal matter.

A further study of the subject of auto-intoxication has convinced me that there are other sources of toxic substances which may produce auto-intoxication, beside that due to micro-organisms such as are found in perverted metabolism. For instance, in all katabolic

processes, many of the normal products are distinctly toxic, and the body is protected from their malign influence only by rapid removal or conversion into inocuous substances by oxidation. Thus we have the alloxuric bases produced. They are likewise known as the nuclein bases, since they are common decomposition products of true nucleins. It may be possible, therefore, that cyclic vomiting is an auto-intoxication due to sencomaine poisoning, and that adonin may be the particular substance which gives rise to the group of symptoms seen in these cases.

Prof. Chittenden, in a paper read before the Pathological Society a short time ago, refers to certain experiments of Minkowski, in which pure adonin was fed to dogs. Four hourly doses of 0.5 grains each were administered. Six hours after the last dose, vomiting began and was more or less continuous for some time, with an utter refusal to take food. On the eighth day the animal died. Post-mortem examination showed an intense inflammation of the mucous membrane of the stomach and intestines, together with a very noticeable alteration of the kidney structure. This cannot be due to local action, since the same result is obtained when the adonin is introduced subcutaneously.

The cause of this disease is still very obscure, but it is undoubtedly due to auto-intoxication, and the source as well as the character of the poison may vary at different times and in different cases. Further study, both clinically and experimentally, will be necessary in order to settle many doubtfully questions in relation to it.

DISCUSSION.

Dr. Henry Chavanne, of Salem: "The reader stated that the treatment of these cases is comparatively useless. This brings up to my mind four cases occurring in three weeks, two lapping one another, and going on almost to the condition of exhaustion. I found it useless to introduce anything into the stomach. Every one of these four cases recovered under a very simple treatment, consisting of half a grain of codein, $\frac{1}{100}$ of a grain of aconitin and a small quantity of veratrum viride in a glass of water, and given in doses of half to one teaspoonful at short intervals until there was a disposition to sleep. The patients, in time, became sleepy, and after a prolonged sleep, they rapidly recovered. The pathological lesions described were probably nothing more than the effect on the tissues produced by continued vomiting. If we can by any means—by sleep or anything else—reduce this irritation we can help nature in bringing about recovery."

Dr. Charles P. Noble: "I would not have risen to speak had it not been for the remarks made about the pathological condition. As a surgeon having some experience with ptomaine poisoning arising in the intestine, I would suggest that the intestinal canal be washed out in these cases. I would also remind you that the best eliminative agent is water. These facts I have learned as an abdominal surgeon, and I have come to place much reliance upon them. Some years ago we lost many patients from what was supposed to be septic peritonitis, and then it was said that if the bowels were kept open these patients would recover. This seemed ridiculous, and the surgeons soon learned that these cases were not really examples of septic peritonitis, but of auto-intoxication. It would seem that this same general line of treatment would be applicable to the special class of cases now under discussion. Such treatment would not only favor elimination, but would help sustain the heart."

Dr. Marcy: "I think the very simplicity of the treatment used by Dr. Chavanne is the best evidence that it was useless. The fatal cases in my series had already gone through numerous attacks. The treatment does not cut short or alleviate; recovery takes place sometimes under one treatment, sometimes under another. The question of sleep is most important, and the very moment that the toxin is eliminated the child naturally goes to sleep, and I have known them to sleep from twelve to twenty-four hours without awakening. I have tried washing out the bowel most thoroughly, using normal saline solution, and also every other method that seemed to me likely to favor the elimination of the toxin. At the time of the initial symptom of cyclic vomiting the poison has already been absorbed into the blood. The only way to get that out, I believe, is by transfusion, and I propose to adopt this mode of treatment in the next case of the kind coming to me."

Dr. Philhauer: "I have listened attentively to all of the papers presented, and it seems to me that this one just presented will be the most useful to the general practitioner. The picture which the reader of the paper has drawn is one with which we are all very familiar, and we know how desperate these cases appear. I would take exception to the statement that the treatment is practically useless, for the method described by Dr. Chavanne seems to me most rational. True, the poison has been absorbed, but the washing out of the stomach, and the introduction of such an antiseptic as calomel prevents further

absorption. The administration of strychnia and other stimulants seems to me to meet the various indications as far as possible. I think if the four cases had not been treated in that way there would have been four deaths."

ESSAY.

BY WILLIAM S. DISBROW, M.D. NEWARK, N. J.

A MUNICIPAL MOLECH.

One of the most remarkable events in the history of medicine in the city of Newark is that of the occurrence of typhoid fever during the summer and fall of 1898, and particularly that of the epidemic of the winter of 1899. It is not my purpose to go into the details of our water supply, as they are presumably known to the members of the State Society; suffice it to say that when, with the use of the Passaic river water—only a few years ago—typhoid was always present to a great extent, since the introduction of the water of the Pequannock it was rare, and at times none could be found.

If you will look over the table which I have prepared, compiled from the records of the Newark Board of Health, you will find that we were very fortunate in the possession of a water supply which would permit such favorable statistics. As you read on, it becomes less a matter of pride, as you will see that, beginning about August, 1898, something must have taken place to warrant the increased number of typhoid fever cases. At this time there were many soldiers returning to their homes from the various camps, where typhoid was known to exist, and quite a number of cases of typhoid were recorded among them, still, excluding these, we were having more than could be accounted for. A careful study of each case was made to determine where the infection could occur, but with no result, as we were supposedly receiving our regular supply of water from the Pequannock, which was known to be free from infection or contamination when delivered as specified. No reasonable excuse could be offered for the supposed contamination of the water, but the returning soldier, who was accused of causing all the trouble.

While Newark was wrestling with the problem, it was found that the East Jersey Water Company was sending to us daily the water of the death-bearing Passaic, at Little Falls, and selling it to the city as the water of the Pequannock called for in their contract, to the stated

amount of several millions of gallons daily, by the help of a leaky valve, which seemed to be most conveniently located to serve its purpose as a financial success to the company, but as a purveyor of sickness and death to the city of Newark. The valve worked faithfully and the East Jersey Water Company enjoyed it for a time—till they were found out—for which we have to thank the Press, for until that mighty lever was brought to bear the "little leak" was not discovered—and an end brought promptly to its usefulness. This fact was admitted by the East Jersey Water Company, but was explained in such a nice way that the Board of Works came to the conclusion that the pure water of the Pequannock and the foul water of the Passaic could flow separately, in the same pipe, without causing very much sickness and death. The valve is, presumably, still at the same stand, and only its integrity separates the river of life from that of death.

Alas for a city which has to place its trust in a private water company and which must depend upon other than its own; and lasting shame on the one mentioned, for it has grown fat upon the freshly-turned sod of the graveyard and the suffering which their selfishness has produced. In the presentment before the Grand Jury, the sixth section reads: "The cause of the increase in typhoid during the months of August, September and October, 1898, has also been examined into and that the jury can find no explanation, except that it was caused by the introduction of Passaic water from Paterson Falls. The introduction of this water into the Pequannock conduit is proven by the evidence of witnesses, the representatives of the East Jersey Water Company charging it to the leakage of a valve, which was repaired as soon as the facts became known."

You may inquire what the local Board of Health was doing all this time and why it was not stopped. The board has condemned time and again the use of the Passaic river for drinking purposes, going so far as to condemn the reservoirs and driven wells situated near the river at Belleville, fearing the possible infiltration of the river water, even forbidding the use of the sand from this source for building purposes. For this it has been most severely vilified and held up for scorn, and its recommendations ignored till it ceased to be the power for which it was constituted. The subtleties of the "little leak" were unknown, but every endeavor was made to locate the trouble, but in vain. Returning again to the water of the Pequannock, the fever

gradually abated until during January, 1899, it could be stated that we were comparatively free from it and for a number of months succeeding we enjoyed this freedom.

Unfortunately for us, there was looming in the distance greater trials than those we had been called upon to bear and which were to be mere child's play in comparison. During the severe weather it was stated that Newark was exceeding its contract allowance and it would be necessary for the public to husband its resources or to buy water from the East Jersey Water Company all in excess of its official amount. This the Newark Board of Works was unable or unwilling to do, owing to some prohibitive clause in the contract, which, if broken, would annul some of its parts to the disadvantage of the city. The water famine increasing with the extreme cold weather culminating with the blizzard of February, 1899, it was decided by the Board of Works, after serious deliberation, as an absolute necessity, to order the Passaic river water to be turned into the city mains as the only alternative in case of fire and to meet the necessary demand for water, as a precautionary matter informing the public to boil before drinking.

The lower section of the city was the sufferer, and it was here the greatest need of water was felt and here was the battlefield upon which so many fell. It took but a couple of days for the city to find out the difference between the Pequannock and the Passaic. At first, diarrhœal and gastro-enteric diseases abounded, until the deaths from this source alone arose in one week to twenty-two, which, in the absence of other causes and only occurring in the section supplied by the Passaic water, must be attributed to the direct poisoning from this source. The lower section of the city was a hospital, hundreds of cases of more or less severity occurring, and there were but few homes, particularly among those who were unable to purchase special brands of drinking water, where it did not find victims.

Within two weeks the death records show forty-five deaths from diarrhœal and gastro-intestinal troubles in the city, and there can be no reasonable cause offered for this fearful mortality except it be the unfortunate conditions which brought it forth. In due course of time typhoid appeared and for a few weeks stalked freely among us. Beginning with March 18 with but two cases, it rapidly increased until, during its height, one hundred and fifty-five cases were recorded in one week—certainly a plentiful crop. In all, within about two months' time,

upwards of four hundred cases of typhoid were recorded officially, and undoubtedly many others of which no record was made. The harvest of deaths was about fifty, which, added to the above number recorded from diarrhœal troubles, gives the fearful total of about one hundred—a terrible commentary on the management of a municipality which lays such an offering upon the altar of its *mis*management.

Here we may ask the question, what right has a municipality to kill a hundred of its populace and to cause the immense amount of suffering, financial distress and sorrow which this epidemic produced? Has it greater claims than the murderer or the thief? Is there a known necessity which would ask and receive the lives of your dear ones, and could the danger of fire or the grumbling of manufacturers, who might have to lose financially by the necessity of closing their shops, make you willing to supply to your families that culture media of typhoid, the sewage and offal of the cities through which the Passaic forces its slimy, deadly way? Would the following report of the Grand Jury in the case dry up your tears and make you look pleased over your dead?: "That after close examination, in the opinion of all experts who have been before them, the Passaic river water is dangerous to handle and death to drink, because the use of it, even to wash the hands, will engender typhoid, as it is nothing better than well-diluted sewer water and quite as dangerous to health."

The pumping of this water into our reservoirs and mains was done under the most aggravating pressure, in the time of extreme peril and when all the people of Newark were in danger of water famine; it was done only after careful consideration and in face of this danger. The citizens of Newark who could not get water above the second story of their houses called on the Board of Street and Water Commissioners at its offices, by telephone or messages, for water all through the day, and the water was getting lower in the reservoirs. In the face of this danger, "no water above the second story," the public asked and received the recognized death-bearing fluid. Newark received Passaic water upstairs, but in the parlor of the mechanic and in the kitchen of the laborer tears were shed as scalding as those shed at the death of the "first-born." The possible fire, offered as an excuse for the introduction of the Passaic water, was only the fire of the funeral pyre upon which many a fond but blighted hope was consumed.

Newark's disgrace was consummated when she stamped upon her children the mark of their unworthiness; when she fiddled, like Nero, not while the city burned, but when her children suffered and died through her direct agency and in obedience to her command. To my mind there has been no excuse offered, no cause sufficiently exasperating discovered, and at no time were the conditions momentous enough to justify the return to the Passaic river as a water supply. Let us hope that this may not occur again, and that our city government will consider that a death certificate outweighs a poll ticket; that its first consideration will be the physical welfare of its people and whose vital statistics will be of greater import than the premium of its bonds.

Typhoid Fever Statistics, from the Board of Health Reports, 1898.

Pequannock.

	Died	Reported
Jan. 8	1	2
" 15	1	2
" 22	0	1
" 29	0	1
Feb. 5	1	0
" 12	3	3
" 19	1	0
" 26	0	0
Mch. 5	0	0
" 12	0	2
" 19	0	0
" 26	0	0
April 2	0	0
" 9	0	0
" 16	1	2
" 23	0	1
" 30	0	0
May 7	0	1
" 14	0	0
" 21	0	1
" 28	0	0
June 4	0	1
" 11	0	1
" 18	0	2
" 25	0	2
July 2	0	4
" 9	1	1
" 16	1	1
" 23	0	2
" 31	0	0

Passaic River mixed with Pequannock.

Aug. 6	0	0
" 13	1	6
" 20	1	11
" 27	2	11
Sept. 3	0	14
" 10	3	8
" 17	1	13
" 24	3	21
Oct. 1	3	16

	Died	Reported
Oct. 8	3	6
" 15	0	5
" 22	2	3
" 29	0	12
Nov. 5	2	4
" 12	1	3
" 19	2	1
" 26	0	5
Dec. 3	1	4
" 10	0	3
" 17	1	2
" 24	0	3
" 31	1	0

UNMIXED PASSAIC RIVER WATER, 1899.

Jan. 7	1	1
" 14	1	0
Jan. 21	0	0
" 28	0	0
Feb. 4	0	1
" 11	0	0
" 18	0	0
" 25	0	0
Mch. 4	0	2
" 11	2	11
" 18	6	109
" 25	9	155
April 1	10	40
" 8	7	26
" 15	1	14
" 22	6	12
" 29	2	9
May 6	1	1
" 13	1	4
" 20	1	5
" 27	3	12

DEATHS FROM DIARRHŒAL AND GASTRO-ENTERIC DISEASES, 1899

March 18	1
" 25	9
April 1	22
" 8	10
" 15	5
" 22	7
" 29	1
May 6	3

ADDENDUM

TO

REPORT OF STANDING COMMITTEE.

In Memoriam.

EDWARD NORTH, M.D.,

Born July 29, 1841.
Died February 11, 1899.

ABRAM ENGLE CONROE, M.D.,

Born July 8, 1858.
Died June 5, 1899.

HENRY A. M. SMITH, M.D.,

Born July 30, 1839.
Died March 29, 1899.

JOSEPH STICKLER, M.D.,

Born January 25, 1854.
Died May 19, 1899.

LOTT SOUTHARD, M.D.,

Born August 12, 1826.
Died May 14, 1898.

In Memoriam.

ALFRED M. COOPER, M.D.,

Born September 15, 1856.
Died September 15, 1898.

JOHN HELM, M.D.,

Born December 27, 1838.
Died November 7, 1898.

JOSEPH BORDEN GOODENOUGH, M.D.,

Born September 21, 1825.
Died February 1, 1899.

WILLIAM L. ROE, M.D.,

Born December 28, 1821.
Died February 11, 1899.

OBITUARIES.

EDWARD NORTH, M.D.

BY T. H. BOYSEN, M.D.

In the death of Dr. Edward North, Atlantic County has lost an able physician, a skillful surgeon and a worthy citizen; the medical fraternity a member whose achievements were to its honor and to whom his tragic and untimely death, February 11, 1899, is an irreparable misfortune.

Edward North was born in West Waterville, Kennebeck County, Maine, July 29, 1841. He was the oldest son of the late Dr. Joseph Henry North, a successful physician of that State, a graduate of the Bowdoin Medical College and one of the earlier practitioners of this county. He located at Hammonton in 1858, where he practiced his profession many years, until he retired in favor of his son, who graduated from Jefferson Medical College in the spring of 1868. Dr. Edward North had seen service in the military hospitals at Washington, D. C., during the Civil War as a nurse, and this experience, together with his theoretical knowledge which graduated him at the head of his class, well qualified him for the responsible and laborious calling of a "country doctor." In the spring of 1870, Dr. North moved to Jefferson, Wis., and practiced until the effects of its malarial climate forced him to return to Hammonton, the following year, where he remained until 1880, when he accepted a position as physician and surgeon to the Ferroll Iron and Coal Co., of Augusta County, W. Va. There he remained two years, returning to New Jersey and resuming his practice, in which he was engaged at the time of his death.

As a successful physician Dr. North stood high among his brethren, and as a skilled surgeon he had few equals outside the large cities, his ability being bounded only by opportunity, as he hesitated at no operation however delicate and dangerous it might be, and his knowledge and skill generally brought his patient successfully through the ordeal. In many such cases his services were gratuitous, necessitating the expense of modern and costly instruments and the breaking down of opposition to the performing of serious operations by country practitioners held by the laity and fostered by the operators in hos-

pitals and colleges, who depend upon the same for their clinics. The long list of his surgical operations, including difficult amputations, tracheotomy, ovariotomy, lithotomy, strabotomy, removal of the uterus, and operations for hydrocele, varicocele, talipes, cataract, etc., etc., attest to his skill and nerve and can be appreciated by his country brethren who knew the obstacles under which he labored in the lack of hospital facilities and skilled assistants, which add so much to the success and fame of city surgeons.

Dr. North was a member and one of the organizers of the Atlantic County Medical Society, and contributed papers of interest. He held the office of President in 1883, presided with dignity over its deliberations, was appointed on its important committees and delegated to State and national conventions, ever having at heart its interests as well as the success of the profession at large. He contributed to medical periodicals and to "Gross' System of Surgery," in which some of his cases are given.. He was an industrious student, careful and painstaking, keeping abreast with the advancement of medical art and familiar with the latest models and methods of treatment. His medical library, an extensive and expensive one, covered all subjects of interest to the physician and the man whose life is devoted to the welfare of suffering humanity.

Dr. North's record as a politician was remarkably clean. He held the respect of the opposition as well as his own party, which honored him with office. He represented the Republican party of Atlantic County for years as chairman of the County Committee, Coroner and member of the Assembly in 1884 and 1885. His interest in his own town and the respect in which he was held was made manifest in his election year after year to important town offices, as councillor and member of the school board. He was a member of various fraternal societies, a Past Master of M. B. Taylor Lodge, F. & A. M., and a thirty-second degree Mason. The doctor was married twice. Three children and a wife survive him, also three brothers and three sisters.

ABRAHAM ENGLE CONROW, M.D.

BY I. W. HOLLINGSHEAD, M.D., MOORESTOWN, N. J.

Dr. Abraham Engle Conrow was born on the old Conrow homestead, Delran Township, Burlington County, on July 8, 1858. His early education was obtained at the public and private schools and he

graduated at the University of Pennsylvania both in medicine and veterinary surgery. Being so thoroughly interested in veterinary surgery led him to study medicine immediately after. Completing both courses, he came back to the old homestead where he practiced until his death from appendicitis, on June 5, 1899. By his death the Burlington County Medical Society has lost from the roll of its membership one who, during his professional life, was closely identified with its interests. Dr. Conrow was a whole-souled, open-hearted man, generous, a hard fighter and a strong friend. In everything he did he was enthusiastic, wonderfully full of life and vigor, and with a tremendous capacity for and love of his work.

In spite of his life as a physician he found time and strength for many other things. He was a member of several secret orders, Board of Freeholders and Board of Education. In his early life he was a Republican but became a staunch Democrat, and every campaign, national or local, brought out a real earnestness seldom seen. It may be said of Dr. Conrow that he died in the harness.

Dr. Conrow was the son of Darling and Mary Engle Conrow. Fifteen years ago was married to Minnie Buckman Atkinson, a lovely woman of excellent character whose death one month before from pneumonia shocked the entire community. Five splendid children as orphans are left, one girl and four boys. Both parents stricken down, leaving the sad and sorrowful little ones just at the time when they are most needed.

HENRY A. M. SMITH, M.D.

BY DUNCAN W. BLAKE, M.D.

Dr. Henry A. M. Smith was born in Doylestown. Pa., July 30, 1839, and died of suppurative hepatitis at Gloucester City, N. J., March 29, 1899. He married Miss Elizabeth Wister Anson, a most estimable lady of Chestnut Hill, Pa., by whom he had three children—Jessie, Olive and the present Dr. J. Anson Smith, a worthy son of an honored father, who succeeded to the practice of the late Dr. Henry E. Branin, at Blackwood, N. J., and who is now physician to the Camden County Insane Asylum, at Blackwood.

Dr. Smith was educated at private schools in his native county (Bucks) and began the study of medicine with Dr. A. N. Cooper as preceptor, at Point Pleasant, Bucks County, Pa., and graduated at the

Jefferson Medical College, Philadelphia, in March, 1864. He then entered the United States service and for thirteen months served as acting assistant surgeon, doing hospital duty at Chestnut Hill, Pa. In 1865 he located in Gloucester City, N. J., where he has since been continuously engaged in a large general practice, endearing himself in the esteem and confidence of the community, rich and poor alike receiving his undivided time and attention. So devoted was he to his patients and profession that he took but little thought of himself, and by his zeal and overwork died in the harness of the profession he loved so well.

By his courtesy and cordiality, his simplicity of manner, honesty of purpose and sincerity in action, by his professional skill, faithful discharge of his duties as a physician, and devoted adherence to the faith of the Christian, he commanded the love and respect of all who knew him, both in public and private life. Not only was he the exemplification of gentleness and kindness under all circumstances, but he also possessed the courage and firmness to do the right as God gave him to see the right. In 1867 Dr. Smith became a member of the Camden District Medical Society and served as president in 1878, as senior censor and as a frequent delegate to the Medical Society of New Jersey, filling each of these offices with marked ability and a high sense of professional honor. He was also a corresponding member of the Camden City Medical Society. In his professional life the Code of Medical Ethics was his guide; he cherished a deep reverence for its precepts and lived to it and by it. In his intercourse with other members of the profession he was kind, courteous and entertaining; in consultation fair, honest and sincere, never taking undue advantage of another, never insinuating wrong, but giving the benefit of his well-stored mind in the resources of his profession. He was slow to speak, but of such deep thought that it was with unerring certainty. He was temperate in all things, a great lover of truth—his word was his bond. His whole life was characterized by everything that was noble, everything that was good—a life worthy of emulation. A volume of his life could be written, and then the story not half told.

JOSEPH WILLIAM STICKLER, M.D.

He died on May 18, 1899, after a short illness. He was born in Hoboken, N. J., on January 25, 1854. When he was four years old his parents moved to Orange; here he passed his boyhood and was

prepared for college. His academic education was obtained at the University of the City of New York, from which institution he graduated in 1876, with the honor and the degree of B. S. He then began the study of medicine at the College of Physicians and Surgeons, Medical Department of Columbia University. He received the degree of M. D. in 1879, and then served a term as lecturer in the Presbyterian Hospital; also a period of six months in the Lying-in Asylum, New York. For one year he lectured on skin diseases and comparative surgery in the College of Comparative Medicine, in New York.

In 1881, Dr. Stickler began the practice of his profession in Orange, and in 1882 he received the appointment of attending surgeon to the Orange Memorial Hospital, and until his death was a faithful and devoted officer of that institution. Early in the course of his service in hospital he was appointed pathologist. His devotion to this special service led him to spend time, thought and money in developing a laboratory for diagnostic and pathological research; through his endeavors a building was erected to house the laboratory so that its scope and usefulness might be extended. This building also accommodates the dispensary department of the hospital.

Dr. Stickler was largely instrumental in introducing laboratory methods in the diagnosis of diphtheria. He voluntarily resigned his position as surgeon to the hospital, to enter the sister service, in order to avail himself of the opportunity to study the treatment of tubercular phthisis in the Shepard pavilion recently erected. He was one of the first American physicians to go to Berlin to investigate the merits of Koch's "tuberculin," and he brought the experience he thus gained to bear upon his service in the phthisis wards of the hospital. It will be remembered by the members of this society, how disappointed the Doctor was at the results of his numerous experiments in this direction.

Dr. Stickler was a fearless investigator in several lines of pathological research, and one of his inquiries, which he began several years ago, he was persistently pursuing at the time of his death. In 1886, he went to England to study the possible connection between the bovine "foot and mouth disease" and scarlet fever, and its transmission by the medium of infected milk. In this investigation he discovered facts that he thought confirmed his theory, that by the use of a virus he could prevent scarlet fever, and he published several papers in the medical press on this subject.

In his practice, Dr. Stickler gave preference to the diseases of the lungs, and his study of bovine tuberculosis brought him into prominence. He was appointed Chairman of the Committee on Tuberculosis of the New Jersey State Medical Society; in this capacity he was influential in securing the passage of laws legalizing the killing of cows affected with tubercular disease. He also took the prize of the New Jersey Medical Society for a thesis upon "The Local Diseases of Essex County, N. J."

Dr. Stickler was an excellent teacher and a fine demonstrator. As a citizen and a public man he was conspicuous for his deep personal interest and his well-considered views in religious, political and educational affairs. He was an active member of all the prominent local societies having in view the general welfare of the community. He used his means very liberally in benevolent work. He was everybody's friend, and when in need of counsel and sympathy, no one ever feared a rebuff. He was a genial, warm-hearted, cheerful, Christian gentleman.

Dr. Stickler was one of the original members of the Orange Mountain Medical Society, and had been its President; his memory will be cherished as that of a companionable, cultured and scientific physician. Whatever he had to say was worthy of our consideration, and often showed laborious and thoughtful preparation.

LOTT SOUTHARD, M.D.

Lott Southard was born in Basking Ridge, N. J., August 12, 1826; he died in Newark, May 14, 1898, aged 72. During the first year of his life his parents removed to Clyde, Wayne County, N. Y., near which place his childhood and early youth were passed. Here he received the ordinary common school education of the township. In 1851 he was graduated in medicine at the Geneva Medical College, of New York, and removed to Newark, N. J., and began the practice of his profession in the autumn of the year of graduation. His first office was upon the very ground as that he used to the time of his death. Here he built up a large and influential practice, the district literally growing with his growth. Professional influence gave him public importance and he soon became a quiet but potent factor in politics. He had neither time not desire for public office, but on January 1, 1879, he was appointed one of the Commissioners of the

Newark Aqueduct Board, which position he held until January 1, 1885. In the part of Newark which his enterprise did so much to improve his large holdings of land gave him additional influence. He was not merely the landlord, but the friend and advisor of his tenants, for he was a clear-headed and judicious counselor.

His genial disposition added to his hosts of friends. He was a liberal and unostentatious giver wherever his sympathies were enlisted. For many years and up to the time of his death he was one of the trustees of the Sixth Presbyterian Church of this city. He donated the land and gave liberally towards the erection of the beautiful church in which the congregation now worship. In June, 1881, he was appointed one of the attending physicians to the Hospital of St. Barnabas, and in the following July was made President of the Medical Board. He continued his active service until November, 1884, when, in consequence of failing health, he resigned and was signally complimented by the Medical Board by election as their Permanent President. This office was vacated by his death. Even after ill health had caused him to relinquish the active labors of his profession, he retained his interest in its progress and sought with avidity knowledge of the new modes of healing and the methods by which they had been reached. He was the presiding officer of the Essex County Medical Society in 1876 and at the last annual meeting was appointed a permanent delegate to the Medical Society of New Jersey. He was also a member of the Board of Trade of the City of Newark.

ALFRED M. COOPER, M.D.

BY E. D. LEIDY, M.D., FLEMINGTON, N. J.

Dr. Alfred M. Cooper died at his residence in Point Pleasant, Pa., September 15, 1898. He passed away peacefully, and after a period of forty-two years, spent in healing and helping the suffering and sick, a life full of kindly benefactions came to an end. He was born near Point Pleasant, Pa., in Tinicum township, September 15, 1830. Worked on a farm until nineteen years of age, attended school at New Britain, Pa., and for five years taught public school in Tinicum township, and subscription at Point Pleasant. He studied medicine under Dr. De Witt Hough, at Frenchtown, N. J., and graduated at Jefferson Medical College on March 8, 1856.

He began his practice immediately at Point Pleasant. He married Elizabeth Ridge on March 21, 1861, and was in active and continuous practice at Point Pleasant, Pa., for forty-two years. He was school director of Plumstead township three terms; censor of Medico-Chirurgical College; inspector of Pennsylvania State Board of Health; member of Point Pleasant Baptist Church for forty-five years; also, ex-clerk and ex-deacon of same; a member of the American Medical Association; member of Pennsylvania State Society; member New Jersey State Society; member Lehigh Valley Medical Society; ex-President of Buck's County Medical Society, and a member of the Hunterdon County, N. J., Medical Society.

He was a man of sterling qualities and high professional standing; honorable with his fellow-practitioners and kind and attentive to his suffering patients, affectionate and devoted to his family. He leaves a widow, one daughter and two sons—William R. Cooper, of Point Pleasant, Pa., and J. Howard Cooper, of Middlebush, N. J., both of whom are practicing physicians.

JOHN HELM, M.D.

Dr. John Helm was born on December 27, 1838, graduated in medicine in 1860 and in 1863 joined the Third New Jersey Regiment of volunteers, serving as assistant surgeon until the close of the war. He then settled in New Brunswick where he continued to practice medicine until his death, which occurred on November 7, 1898. He was eminently successful in his work and took great interest in educational matters. He was a member of Middlesex County District Medical Society and served us many years as a permanent delegate to the State Medical Society.

JOSEPH BORDEN GOODENOUGH, M.D.

Joseph Borden Goodenough was born at Farmingdale, N. J., September 21, 1825. He was a graduate of the College of Physicians and Surgeons, New York City, 1851. Began practice at Farmingdale, N. J., in 1852, where he remained twenty-four years, removing to Long Branch in 1876, where he continued in successful practice until a very short time before his death, of hepatic pneumonia and cardiac failure, February 1, 1899. Dr. Goodenough was a modest and retir-

ing gentleman, avoiding notoriety, publicity and political preferment. He was an ideal gentleman of the old school and unselfishly sacrificed his time and forsook pleasure to minister to ailing humanity and faithfully attended a large practice. A large circle of friends mourn their loss. He was a member of Long Branch Lodge, No. 429, Royal Arcanum, of which order he was a consistent member, respected and esteemed. His life work is now a complete volume and many may learn valuable lessons by carefully scanning its pages. "Requiescat in Pace."

WILLIAM I. ROE, M.D.

BY J. H. GRIFFITH, M.D.

The subject of this sketch was born in Morris county, December 28, 1821, and died at his home near Vienna, February 11th, 1899. He received his education in the public schools of Sussex county in which his father resided during his boyhood. When hardly out of his teens he began teaching school which he continued until he took up the study of medicine with his father. He attended lectures at the College of Physicians and Surgeons in New York, and graduated from the Pennsylvania College of Medicine in 1847. In 1848 he came to Danville, this county, and began the practice of his profession with Dr. Joseph W. Campbell, who was long located at that place and died near Budd's Lake a few years ago at an advanced age. In 1853 Dr. Roe left Dansville and went to Branchville and practiced in that place and Newton till 1872, at which time he moved to Vienna where he succeeded Dr. Bowlby, who located in Hackettstown, continuing in active practice untill 1880, when he was succeeded by his only son, Dr. Jacob I. Roe, who after some seven years of hard work in a rugged country and a growing field deemed it prudent to make a change and therefore went to Wilkesbarre, Pa., where he has met with signal success.

Dr. Roe was always fond of agriculture, and after retiring from practice purchased a large amount of real estate which he cultivated and improved and on which he found real pleasure.

Dr. Roe, in 1851, married Susan, daughter of Levi Howell, of Frelinghuysen township, who, with his son above mentioned, survives him. Dr. Roe, while diligent in the practice of his profession, was a good business man and an enterprising and useful citizen. He was

alive to the needs and interests of the locality and was deeply concerned in the moral and religious welfare of his community. Now that he is gone his neighbors will realize what a valuable physician, neighbor and friend they have lost. In reviewing his long and active life as a physician and a man, one is naturally reminded of the graphic and touching and true picture of the "Country Doctor" in "Bonnie Brier Bush," as typified by Dr. Ian Maclaren. And it is a striking coincidence that the closing scenes of Dr. Roe's life, death and burial are so like those of the stern, heroic Scotch doctor, whose strong and kindly character has softened so many hearts and won so wide a circle of admirers. His was indeed an active and useful life, such as might have been expected of a man of such earnest and sturdy character. In his arduous labors and trying experiences he had in his wife a helpmeet whose inspiring influence and sustaining strength was an unfailing support to the last.

The funeral service took place on Wednesday morning in the M. E. Church of Vienna, of which the Doctor was a member, conducted by his pastor, Rev. Mr. Yeager, assisted by Rev. Crouse and Wilmarth. The remains were taken on Wednesday to Wilkesbarre, Pa., for burial in the family plot of his son.

REPORTS OF DISTRICT SOCIETIES.

ATLANTIC COUNTY.

To the Chairman of the Standing Committee, &c.:

Regular meetings of the Atlantic County Medical Society have been held at Atlantic City during the year. In order to accommodate out-of-town members these meetings have been held during the day, which has proven an inconvenient time for many of the city members and is, in part, responsible for the usual small attendance.

During the year the society has lost two of its prominent members—Dr. Boardman Reed, who has moved from this county and established offices in Philadelphia, becoming a non-resident member, and Dr. Edward North, of Hammonton, whose death occurred last February. Dr. North was once President of this society and has contributed several valuable papers to its meetings. The names of Dr. Theodore Senseman and Dr. W. M. Barnes have been added to the membership, making a membership of twenty-eight.

No epidemics of any note have been reported in this county. Measles and mumps have been present, but in mild form and small number of cases. The general health condition of the city and county still retains its excellent high rating. During the last fiscal year but nineteen cases of typhoid fever have been reported in this city and much the greater majority of these cases were non-residents.

This report would be incomplete without some mention

of the Atlantic City Academy of Medicine. This association, composed of the regular practicing physicians of Atlantic City, holds its meetings monthly from October to May inclusive. These meetings are held at night and well attended. Besides the contribution of papers and reports of cases by members, it is customary to have some visiting physician give a paper at each meeting. As a result, these meetings are especially interesting and secure most of the contributions from the profession instead of these going to the County Society's meetings.

EMERY MARVEL, *Reporter.*

BERGEN COUNTY.

To the Chairman of the Standing Committee, &c.:

The Bergen County Medical Society has held regular quarterly meetings in Hackensack and Englewood alternately throughout the year and the meetings have been fairly well attended. The fact that your committee has received no report from Bergen County for the past two years must not be attributed to any lack of interest on the part of the members of the society, but to personal negligence of its reporter.

I am pleased to report the flourishing condition of the society, increasing in interest as well as in numbers. Our last meeting, which was held at Hackensack, April 11, being the annual meeting, the following officers were elected, viz: President, Dr. Charles Calhoun, Rutherford; Vice-President, Dr. A. L. Vandewater, Hackensack; Secretary, Dr. D. A. Currie, Englewood; Treasurer, Dr. David St. John, Hackensack; Reporter, Dr. James W. Proctor, Englewood.

Four new members have been added to our roll, making

a total of thirty-one members. I am glad to be able to report that no deaths have occurred in our society during the year.

Many interesting and instructive papers have been read, some of which have already been forwarded to your committee. Our meetings, for the most part, have taken the form of personal presentation and discussion of cases as they occur in practice. Much interest has been added to the meetings of late by the appointment of essayists at the annual meeting to read papers at each stated meeting. Among some of the papers read during the year were: "Gastro-intestinal Diseases of Children," by Dr. H. C. Neer, Park Ridge; "Infantile Paralysis following Intermittent Fever," by Dr. Howard McFadden, Hackensack; "Hæmaturia," by Dr. B. D. Stone, Westwood; "The Use of Chloral in Obstetrics," by Dr. L. B. Parsell, Closter. I regret that the circular letters were not more generally responded to, hence, my report is not as general as it otherwise might have been.

Dr. D. A. Currie, Englewood, congratulates the city and vicinity on their freedom from serious epidemics. The reports of the Committee on Disease at the regular quarterly meetings of the society, claim an unusually healthful twelve months. Under the head of contagious diseases Dr. Currie reports seven cases of measles, fifteen of mumps, three of scarlatina and an occasional well-marked case of diphtheria through the winter. Malarial fever existed to a moderate degree. Typhoid fever was introduced by the return of the soldiers from the South, otherwise the disease scarcely existed; in fact, Dr. Currie could not recall a single case having its origin in this part of the State. Dr. Currie also reports the prevalence of "la grippe" during the months of February and March as an epidemic.

Dr. H. C. Neer, Park Ridge, reports diseases of malarial origin less prevalent during the past year than in some previous years, and reports the same of gastro-intestinal disease. "La grippe" appeared about the middle of December and prevailed epidemically for about six weeks. Dr. Neer also reports twenty-three cases of typhoid fever between July, 1898, and January, 1899. These cases occurred in eleven families. In eighteen of these cases occurring in nine families, the disease was traced to infected milk supply. In the other two families, including five cases, the origin was doubtful, but probably arose from impure drinking water, one well being near an offensive and overflowing cesspool. Eight of these cases occurred in Park Ridge, seven in Hillside and eight in Westwood. The type of disease was not severe, except in a few cases, and all but one recovered.

Dr. Neer also reports fifteen cases of scarlatina of mild type, one alone being malignant, but all recovering. Dr. Neer further writes: "Four quite severe cases of dysentery came under my care during the past winter. They were perfectly characteristic and quite difficult to control. There was nothing in the surroundings nor alimentation that would give rise to the disease, but it was rather a peculiar coincidence that the first case, and the most severe and obstinate one, occurred in an aged and feeble lady, while the other three members of the family suffered at the same time from 'la grippe,' and three other families in the immediate vicinity suffered from the same malady. In the second case, in a family of two, the husband had 'la grippe' and the wife dysentery. The other two cases occurred in children."

Dr. L. B. Parsell, Closter, reports an epidemic of scarlatina of mild type occurring in the public school at Alpine, in January. There were in all twenty-three cases

and all recovered without complication. The school remained closed for four weeks. Dr. Parsell also reports a case of puerperal eclampsia occurring twelve hours after delivery, of uræmic origin, apparently, cured by hypodermic injections of veratrum viride. Two injections were given of five and ten minims each. Dr. Parsell also reports the prevalence of "la grippe" during December, many cases assuming the cerebro-spinal form and proved very fatal. Pneumonia was more prevalent than for several years, the majority of cases recovering.

Dr. E. E. Conover, Hasbrouck Heights, reports a case of scorbutus in a child fifteen months old, just beginning to walk. There was gradual loss of strength, until the child could not move or be moved; gums swollen, ankles swollen, bowels constipated, head covered with erythema. Complete recovery took place in three weeks, on milk and orange juice. Cause of disease, patent food.

Dr. B. D. Stone, Westwood, reports an epidemic of typhoid fever of mild type occurring during the summer and autumn of 1898. There were some twelve or fifteen cases reported, all recovering. The disease was conveyed by means of milk. Ten or twelve cases of scarlet fever occurred during the winter months, with no deaths.

Dr. W. L. Vroom, Ridgewood, reports the prevalence of pneumonia.

Dr. J. E. Pratt, Demarest, reports an epidemic of measles prevailing. Dr. Pratt also reports a case of suppurative hepatitis in a man of sixty, an immense collection of pus evacuating itself through the bronchi, with recovery.

Dr. Lansing, Tenafly, reports twenty cases of epidemic cerebro-spinal meningitis occurring in his practice during the winter, the details of which, I am sorry to say, are not in my possession.

The few members of our society who have expressed any opinion on the subject, "To what extent is the Code of Ethics of the American Medical Association in operation today?" all agree that it is observed to a very limited extent, if not entirely ignored.

J. W. PROCTER, *Reporter.*

ENGLEWOOD, N. J.

MALARIA A CAUSE OF INFANTILE PARALYSIS.*

BY G. HOWARD MC FADDEN, M.D., HACKENSACK, N. J.

I wish to briefly present histories of some cases, and then my conclusions:

1. M. C., aged 7 years; malaise, chill, sleepy; for two weeks has been unable to talk; difficult deglutition; five weeks sick; could not walk for two weeks after. Hair came out. Mind clear, understanding all that was said to her; dribbling of saliva from mouth. The case called glossolabial-pharyngeal paralysis. Convalescence took about two months.

2. Girl, 7 years; malaria; left leg affected for three weeks; strabimus and throat paralysis four days.

3. Girl, sister of above, aged one year. Intermittent symptoms; nervous system only affected.

4. Baby, 2 years; cold stage, fever and drowsiness; after fifth day diminished motion left leg, and cold extremities.

5. Edith; intermittent symptoms; after five days could not walk, and complained of pain in heel; leg cold; fever lasted about two weeks; then slight atrophy of left leg and impaired motion; foot rotated ontward. Child had never had any illness before this attack. Family history good. She is still under treatment though much improved.

6. Mary B., aged 3 years. July 31, 1897, woke up with a very high fever about 2 a. m. Her parents administered fever medicine every two hours and all day Sunday. In the afternoon cried, and her right eye was noticed to be slightly drawn. Monday morning parents

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* Read before the District County Medical Society for the County of Bergen, at its annual meeting, April 12, 1898.

noted that the mouth and eye were drawn a good deal. Child wanted to go to breakfast, but could eat nothing and drank only a little coffee, which ran out of the corner of her mouth at the right side. I was then called in and found she did not want to walk or stand on her feet. She said she was tired; wanted to be carried; was sleepy all the time; did not want to talk, but would answer if spoken to; then would apparently go to sleep at once. She ate nothing solid from Saturday until Wednesday noon, when she began to improve. Complained of right leg hurting her and did not use it very well. She was unable to walk for four days; mouth drawn for six weeks. Bowels did not move freely without the aid of cathartics. Eight or nine weeks passed before she could walk without lameness.

7. Mary B. This child developed scarlet fever six weeks ago, which took the usual course, but there was a slight return of the paralysis. She died on the twenty-first day from the beginning of the attack, of scarlet fever or uræmic convulsions; two days before death, urine contained no albumen, but that secreted the day of her death contained about fifty per cent. of albumen and was filled with casts. Examination of blood in November showed a normal condition.

8. Patrick, 4 years. Family history negative; personal history, croup, November, '96. For two weeks was nervous, then felt better. Present illness began in June or July, 1897, with nausea and vomiting, followed by a rise of temperature; no fever after this. On the second day mother noticed inability to walk; child said heel hurt, and mother says toes only touched the floor. Could not walk for two weeks. About two months ago, mother noticed child's leg was cold. Other than cold leg and impaired gait, child feels well. Physical examination: Child fairly well nourished, condition good, except lower left extremity; this is cold, the thigh and calf are one inch less in diameter than the right. There is no spasm of muscles about hip and it can be moved freely and equally as well as the other. He walks with a slight limp with the foot rotated out and with a tendency to "foot drop."

9. Lena S., 6 years. Diphtheria; four weeks from beginning of attack slight paralysis of throat and labial muscles; some regurgitation through nose; tongue affected so that could scarcely understand her; there was a general paralysis simulating multiple neuritis; complete recovery.

10. Rosenthal gives case of boy of 4 years; after a short attack

of an unnamed fever, a general paralysis of all limbs, which disappeared in a short time, except in arm.

11. About three months ago I examined Alice E., a soldier's orphan, who was applying for a pension. She had an attack of intermitting fever when two years old, followed by paralysis of lower extremities. At first there was no control of the bladder, but that disappeared after several years; but now, eighteen years after attack, there is total paralysis of lower extremities and marked atrophy of left side. I have been told that about thirty years ago there was an epidemic of this kind in Paterson, N. J., of more than one hundred cases.

These cases were characterized, not by a remittent fever, but by simple and remittent fever, chill or cold sweat, then a temperature of 102 to 104⅘, tongue cry and coated, constipation after third or fourth chill; on the fifth day, dropping of mouth and then inability to stand. Children complained of pain in the heel; difficulty in swallowing; strabismus; pupils unequal; some regurgitation of food; dropping of shoulder of affecting side; partial loss of sensation. In two cases there was inability to articulate; in one case for at least ten days, another one, for four or five days.

"Spinal infantile paralysis may assume a form of paraplegia, but rarely of hemiplegia" (Rosenbaum). There was a slight atrophy of affected parts; convulsions terminated in vomiting. Osler says: "Boys, more than girls, are affected, and more frequently in warm weather." My experience is contrary to that of Osler in this particular.

In a book recently published, entitled, "The Fatty Ills and Their Masquerades," by Ephraim Cutter, M.D., LL.D, and John Ashburton Cutter, M.D., of New York, I find a good deal of interesting material as to the diseases of fatty degeneration caused by poison and, as considered by these authors, faulty feeding. Among those directly caused by poisons, I find the fatty ills to be diphtheria, scarlet fever, yellow fever and syphilis. Large doses of phosphorus also produce this trouble, and, in one instance, death being caused by the eating of a bad oyster, the autopsy showing fatty degeneration of many organs. This last instance, taken from a European journal, and noted in an editorial item in the *New York Medical Journal.* These authors also note the fatty degeneration caused by alcoholism, and the fatty degeneration of locomotor ataxia, palsy, Bright's disease,

cataract, hæmatophilia, glaucoma and general debility. I quote from this work, pp. 41, 42:

"Paresis means general paralysis of motion (and not of sensation), more or less complete; if complete, there would be no paresis, because death would at once follow from heart paralysis. It is rather a paralysis resulting from the degeneration of the tissues of the body, not confined to the muscles, but embracing the structural elements of the nerves, fibrous tissues, etc. It is most likely to be fatty in some one or more of its forms. There are partial responses to stimuli of the sensory or motor nerves, but there is also a relaxation which shows that the neurotic system is paretic. Instead of masquerading as a separate disease, it should appear as only one of the manifestations of fatty ills, which demand an interstitial nutritive treatment whereby Nature can and will destroy the degeneration, entirely remove the fat intruders and thus cure on common sense principles."

We have considered that many acute and chronic diseases were inflammations. I think it is about time for practitioners to consider that instead of inflammations, many of the diseases we treat are really acute or chronic degenerations and have got to be combated on general principles. The evidence which the Doctors Cutter note is very strong as to fatty degeneration under my conditions; why this same degeneration should not be caused by malarial poisoning I cannot see. My treatment in these cases was the exhibition of cinchona, sulphate, quinine, belladonna, ergot, arsenic, strychnia and iodide of soda, according to indications; also, the employment of diet.

It is well to note in closing, that one of the cases died of Bright's disease several months after she was apparently well. This result certainly shows that the child had been tremendously poisoned, to have had, after an apparent cure, this acute fatty degeneration of the kidneys. Furthermore, as we are likely to have more of these cases, it is well for us to look for clinical evidence of fatty degeneration as evidenced by albumen, casts, amyloid and fatty epithelia in the urine, and also the free oil in blood specimens, and of fatty globules in the white blood corpuscles, as noted by Dr. Cutter.

BURLINGTON COUNTY.

To the Chairman of the Standing Committe, &c.:

As directed by the By-Laws, I submit the report of the Burlington County District Society. The past year has been a rather active one in the society, both in increase in membership and in literary work. For several years the members have felt that the social and gastronomic side of our meetings had received more attention than the scientific side, and as a remedy, trial has been made of the following plan: The society is divided into three sections—medicine, surgery and obstetrics (including gynæcology and pediatrics). A chairman is elected, at the annual meeting in January, for each section, and one meeting a year is given to each section, the chairman being responsible for the success of the meeting, getting essays, etc. This plan is leading to a decided increase in the work, has made the meetings more interesting, and so far has proved an entire success. If after a year's trial it is still satisfactory, it will be incorporated in our By-Laws.

There is little else to report as to the society itself, which would be of interest beyond its limits. Up to June 1, there have been no deaths among our members during the year.

Dr. J. B. Young, of Bordentown, reports an interesting case of asphyxiation by illuminating gas. He says: "About 7 a. m., on February 6, I was called to see E. H., a man aged 40; a hypochondriac. Shut up in a room, with the gas jet turned on; he was, when I saw him, completely asphyxiated. Respiration stretorous; heart feeble; pulse 80; pupils contracted; feeble reflex on tickling feet. My friend, Dr. Shipps, was with me in the case. Artificial respiration was resorted to. Sinapisms

applied to leg for two hours made no impression; $\frac{1}{20}$ gr. of strychnia was given every four hours, and after two days, consciousness returned, pulse and respiration became normal and intellect fully recovered. Before the asphyxiation he had no urinary trouble, but he now had complete retention of urine. From that time he passed no urine except by catheter. Cystitis developed and he died March 2."

Dr. William L. Martin, of Rancocas, reports an unusually severe case of typhoid fever, with repeated severe hemorrhages. After the fever subsided, polyuria developed and lasted several weeks. On the same day 240 fluid ounces of a pale urine (sp. gr. 1004–1006) were passed. This condition was improving at the time of his report, but had not yet disappeared.

Dr. Parsons, of Mount Holly, reports a number of cases of diphtheria, and attributes the favorable results and low mortality to the more general use of antitoxin.

From the reports received, there seems to have been no unusual amount of sickness in the County during the past year, with the exception of an epidemic of "grippe" during December and January. I have made special inquiry into some features of this epidemic. In the opinion of most of the members of the society, it was not as widespread in the community, nor were the cases as severe, as in the epidemics of 1889 and 1891, though many report that complications and sequelæ were severe. Dr. I. W. Hollinshead, of Moorestown, reports two rapidly fatal cases of pneumonia, following it.

Dr. Young, of Bordentown, had a number of cases of pneumonia, and nervous phenomena seem to have been as frequent as in previous epidemics. Dr. Alexander Small, of Riverside, reports a number of cases of the abdominal type. At Moorestown, the epidemic was as

widespread as ever before, attacking a large percentage of the community. The cases were mostly short, and I saw no pneumonia. In my experience, the most distressing sequelæ have been abscesses in the ears and frontal sinus.

In the treatment of "grippe," Dr. Parsons believes that the more general recognition of the necessity of rest during the attack accounts for the comparative absence of complications. Inquiry into the medicinal treatment develops the fact that most of our members use the coal tar preparation in the early stages, and quinine and strychnia later. Four have used salicylate of soda in the early stages, and expressed great confidence in its ability to abort the disease.

Very few replies have been received as to how far the "Code" is observed at present. Dr. Price, of Tuckerton, fears there is a decline in its observance.

Dr. W. H. Shipps, of Bordentown, says: "I venture that not more than fifty per cent. of those engaged in the practice of their chosen profession have a well-defined idea of its true import. My own opinion has always been that the honest practitioner, imbued with the idea of 'doing unto others as he would that they should do to him,' has little use for the so-called 'Code of Ethics.' Theoretically, the code may be all right; practically, it is often a dead letter."

Dr. A. Marcy, of Riverton, says: "As for the 'Code of Ethics' of the American Medical Association, I see but little evidence of its being in form today; in fact, I do not believe the majority of physicians know what it contains. I do not believe a code of ethics, formulated by any association or society, can govern one man's action toward another. It is only a spirit of 'Christ' in a man, that can possibly regulate his conscience and

conduct toward his fellow. The 'Golden Rule' is the only code of ethics necessary, and the only code likely to be of any use. I hope the time may soon come when we shall all follow it."

In Moorestown, I am glad to say that the standard set by the Code is reasonably well maintained.

JOSEPH STOKES, M.D., *Reporter.*

MOORESTOWN, N. J.

CAMDEN COUNTY.

To the Chairman of the Standing Committee, &c.:

The Camden District Medical Society is composed of active, energetic physicians. They make the meetings interesting, their papers are instructive, and when the State Society asks for an opinion they express themselves with an intensity that leaves no doubt as to their individual opinions. Because of this active, energetic disposition of the members, the reporter finds so much that is good, so much that is worthy of a place in the State Society's report, that to present it properly it must be arranged under the following:

a.—The papers presented to the society during the past year.

b.—The report from the members giving an account of their practice during the past year.

c.—In Memoriam.

d.—Answers to the inquiry, "To what extent is the Code of Ethics of the American Medical Association in operation today?"

a.—During the past twelve months Camden County District Medical Society held four meetings. During

the meeting held October 11, 1898, the members listened to the following papers: "Clinical Examination of the Blood in Malaria," by Dr. W. S. Bray, of Camden; "Some Obstetrical Experiences," by Dr. C. H. Shivers, of Haddonfield; "Formaldehyde Disinfections," by Dr. J. F. Leavitt, of Camden.

During the meeting held December 13, 1898, the following papers were presented: "Some Thoughts on New Remedies," by Dr. A. M. Mecray, of Camden; "Some Unique Cases in Practice," by Dr. John W. Marcy, of Merchantville; "Gunshot Wounds of the Intestines," by Dr. J. L. Nicholson, of Camden.

During the meeting held February 14, 1899, Prof. John B. Roberts, of Philadelphia, gave a very interesting and instructive address on "The Rational Treatment of Appendicitis."

The meeting held May 9, 1899, was the annual meeting, at which time our retiring President, Dr. Daniel Strock, gave the address. This address was one of the best ever presented to our society. I regret very much my inability thus far to get it for publication in Camden District Society's report. During the banquet which followed the annual meeting, the toasts called for were: "Twentieth Century Medicine," responded to by Dr. Alexander Marcy, Jr., of Riverton; "Osteopathy, What is It?" responded to by Dr. E. L. B. Godfrey, of Camden; "The Camden District Medical Society," responded to by Dr. Daniel Strock, of Camden; "The Medical Profession in New Jersey," responded to by Dr. W. H. Iszard, of Camden.

All the papers prepared and presented to the society during the past twelve months were above the average and ought to be presented to the members of the State Society, but on account of the length of our report we

will present an abstract of the papers that attracted the greatest attention, both at the time of its presentation and since:

The paper of Dr. Alexander Mecray, on "Some Thoughts on New remedies," was divided as follows: 1. Ice treatment of croupous pneumonia; 2. Dry heat and oil of wintergreen in rheumatism; 3. The use of the saline solution by intravenous injection in cases of uræmic poisoning, more especially in eclampsia.

1. Ice treatment of croupous pneumonia. It is a well-known fact that cold, when applied to a congested or inflamed part will contract the blood vessels and dissipate the blood in the engorged parts. On this principle, ice is used in pneumonia. There is no longer any doubt as to the unfailing advantages to be gained by its prompt application during the congestive stage. It reduces the temperature, the redness, the frequency of the pulse, and tones up the heart and adds materially to the comfort and well-being of the patient. The effect cannot be secured by either tubbing or sponging. The ice should be applied directly over the congested or inflamed area. When the temperature falls to 100° F. the ice should be removed and not replaced until a temperature of about 102° F. has again been reached.

2. Dry heat and oil of wintergreen in rheumatism. Under this hot air treatment the pain is diminished and in many cases dispelled, effusions and deposits in the joints absorbed, adhesions broken up and inflammatory conditions relieved, and therefore is applicable to rheumatism in its acute and subacute forms and is quite beneficial even in old chronic conditions which may have gone as far as ankylosis. In giving the treatment, great care should be taken to see that the parts to be "baked" are well dried and covered by bandages, then the temper-

ature gradually raised to the height desired—from 350° to 400° is about the average exposure and gives the best results.

In several cases of sprained joints great relief and rapid cure have attended the hot air treatment in my own practice. It is beneficial in the treatment of joints after fractures when ankylosis is threatened; in breaking up adhesions and absorbing deposits it will ofttimes give a useful joint when other treatment fails. The use of the oil of wintergreen well rubbed in, morning and evening, has also proved most beneficial, in addition to the hot air treatment.

3. The use of the saline solution by intravenous injection in cases of uræmic poisoning, more especially in eclampsia. It is a well-known fact that one could live without blood in his system, provided he substituted another fluid, and a solution of salt six-tenths of one per cent., by repeated experience, has proven to answer the purpose. Dr. Alex. Mecray's idea is that if the urea is washed out of the blood the problem of treating puerperal eclampsia would be solved. The method of procedure—after preparing the solution by taking two drachms of common table salt and dissolving it in two pints of pure water, heating it above the temperature of the body, say 120° F., placing it in a clean fountain syringe kept hot by means of hot towels wrapped about it—is to attach to the rubber tube a small glass tube, and inserting this glass tube into the medium basilic vein and at the same time opening the vein of the opposite arm and allowing the salt solution to run as rapidly into one arm as the blood runs out of the other.

This method of treating uræmia has been in vogue for a number of years, so far as the injection of the solution of salt is concerned, but the point Dr. Alex. Mecray

wishes to emphasize is the simultaneous opening of a vein on the opposite side of the body, thus making it possible to literally wash out the blood and replace the diseased and poisoned fiuid with an aseptic solution which is wholly adequate to maintain the vital forces of the body.

The solution acts in several ways to produce good results, mechanically by filling and stimulating the relaxed blood vessels and, perhaps (this is a somewhat mooted point), by raising blood pressure. Diuresis is greatly stimulated and the elimination of waste products is encouraged and hastened. This is particularly true of toxic matters. The quantity of the fluid introduced at any one time varies from half a pint to a quart. To be exact, it is not safe to infuse a greater quantity of liquid than one drachm to each pound of body weight in each fifteen minutes. For example, a person weighing 160 pounds could receive twenty ounces of fluid with safety at the interval mentioned. The rise of temperature which almost invariably follows both intravenous and subcutaneous injection is to be regarded as a sign of reaction. If a chill should follow it may be relieved by hypodermic injection of morphia and brandy.

b.—Report from members, giving an account of their practice during the past year.

Dr. Marcus K. Mines, of Camden, says that the only contagious diseases that he has attended during this spring have been diphtheria and scarlatina. He has three of the former and four of the latter.

Dr. W. R. Powell, writes: "In compliance with your circular, I desire to state that while on duty at the Cooper Hospital during the terms of Drs. H. Genet Taylor and W. A. Davis, that it was my privilege to see with them, two cases of cerebro-spinal meningitis. The

symptoms in these cases were very characteristic, namely, paroxysmal pain, opisthatonos, cutaneous hyperæsthesia, stupor, herpes facialis, puerpera, polyuria, albumen and fever. One case died and the other is convalescing at the present time."

Dr. W. H. Pratt, of Camden, reports a case of confinement where the child was born without the left hand. It looked as if the hand had been amputated at the wrist joint.

Dr. J. W. Marcy, of Merchantville, writes: "We have had a little more than usual of the winter diseases, with pneumonia in a very severe type as a complication, but thanks to calomel, strychnia (hypodermatically) and veratrium viride, faithfully administered by skilled nurses, there was no mortality, except in the case of an aged lady, where the regular school was in attendance. Our friends on the other side of the fence were, however, not nearly so fortunate."

Dr. Paul M. Mecray, of Camden, sends the following as having been cases of unusual interest to him:

Case 1. Incised penetrating wound of the chest and abdomen; the lung was punctured and collapsed, but expanded after the wound in it had been sutured. Recovery.

Case 2. Had four pistol shot wounds; one destroyed an eye; another penetrated a clavicle; the third made a flesh wound in the shoulder, and the fourth entered the abdomen just below the umbilicus, and was removed from the liver. Bleeding was controlled by iodoform gauze packing. The X-Ray was of considerable service in this case. Recovery.

Case 3. Was a large abscess in the sac of an inguinal hernia and in the abdomen. No gut or omentum was in the sac; a loose orange seed was found in the abdomen. Recovery.

Cases 4 and 5. Were double amputations of the legs —one for gangrene from exposure to cold; the other a railroad crush. Intravenous injection of a normal salt solution did valuable service in the latter case.

Dr. Joseph H. Wills, of Camden, writes: "'La grippe' was unusually severe during the latter part of December and all of January, among the poor of the City of Camden. Pneumonia was more prevalent than it was among this class of patients during the epidemic of 1891 and 1892. I think this was owing to the extreme poverty and debility occasioned by the 'hard times.' Among my better class of patients, a few visits put them in a condition to get along without medical advice."

Dr. W. G. Bailey, of Camden, wishes to make mention of a case of retained placenta for nearly sixteen years. "I have never seen a like case reported. My patient is about forty-three years of age, and has suffered continuously since the birth of last child, who will soon be sixteen years of age. Since I have removed the placenta she has been absolutely free from pain, and is today a well woman."

Dr. Alexander Marcy, Sr., of Riverton, says: "In our locality we have had nothing approaching an epidemic of anything but catarrhal diseases, which I suppose are the usual thing in our latitude throughout every State above Mason's and Dixon's line. These catarrhal disturbances attacked every mucus membrane of the body, but more especially the respiratory tract. Many cases of what is called 'grippe,' which seems to me to have a virulence beyond ordinary influenza, and is so acknowledged, occurred, and in old people was sometimes fatal, but not more so than during previous years. None of the severer forms of disease have been prevalent among us during the year, as anything like an epidemic, even the

exanthemata have been confined to a few cases of scarlet fever and chicken-pox. Typhoid fever is almost unknown, as we have the purest water imaginable; and while we live along side of the Delaware river, but little malaria is known here. I never expect to find a place that I would be willing to live in, where malaria is totally absent."

Dr. Alexander McAlister, of Camden, writes: "During the past year, the prevailing diseases occurring in my practice here have been typhoid fever, pertussis, parotiditis, scarlatina, rheumatism, 'la grippe.' Typhoid fever was more prevalent among children. A word in regard to treatment: Medicinal treatment is purely symptomatic, as in adults, and is less often needed. Rest in bed is, of course, required, no matter how much the child wishes to be up. A milk diet is to be prepared. No purgatives should be given to overcome constitipation, enemata being employed in place of them. With regard to the use of the bath, careful judgment is to be employed in giving it to children; as a rule, they do not bear the plunge well. This is particularly true of younger children. A graduated bath is best, beginning with a temperature of 95° F., and cooling down to 85° F.; older children, lower than this. In most cases this is as effectual as a cool bath, and is less likely to cause excitement and fright. Ordinarily, sponging answers every purpose. Most children bear elevated body temperature remarkably well. I do not think hydrotherapy is to be used as an unalterable plan of treatment merely because the temperature has reached a certain figure. If it is used according to any such method, it is capable, particularly in children of doing often, far more harm than good. I have no confidence whatever in the abortive treatment.

"'La grippe' has been of a severe type; a common

complication has been inflammation of the middle ear, and convalescence in most cases very prolonged; usually caused by a weak heart in most instances. I have treated a few cases of diphtheria, with the same success as formerly, with antitoxin. I believe it to be now very generally used."

Dr. Joseph L. Nicholson, of Camden, reported before the Camden District Medical Society, two cases of enterorraphy for bullet wounds. One patient had five perforations, and the other three perforations. Both made prompt and perfect recoveries. He also reported before the Camden City Medical Society, two cases of suprapubic cystotomy for stone, in boys two and one-half years of age. Perfect results in both, in ten and fourteen days. Also, one case of cholecystotomy for cholelithiasis in a woman. Recovery, with no sequelæ.

Dr. John R. Stevenson, of Haddonfield, writes that the health of Haddonfield and vicinity has been fair during the past year. Among children, rubeola has prevailed to some extent. Malarial diseases have not been prevalent. Contagious and infectious diseases have been infrequent, with the exception of "la grippe," which, early in December, lasted until spring, and was more violent in its symptoms than at any time since its first appearance in 1890. During the past nine years this place has been visited annually with more or less severity.

From our experience we have learned that it does not break out until the doors and windows are shut in the autumn, and that it disappears when they are opened in the spring. It is a contagious disease, whose incubation may be as short as twenty-four hours. Adults are more subject to it than children. The majority of people have "la grippe" but once, although a large minority contracted it twice, or oftener. Subsequent attacks are

usually not so violent as the first one. The disease in itself, when uncomplicated, is not dangerous, but the debility is out of all proportion to the symptoms, and sequelæ are frequent, and after middle life, serious. More people here, past the age of fifty, have died prematurely from the effects of "la grippe" than from all the other diseases combined.

Dr. Joseph S. Baer, of Camden, writes that he has to report for this year, thirteen cases of abdominal section, with one death. This death occurred in a neglected case of ectopic gestation; the patient was in a septic condition at time of operation, and died several weeks later from exhaustion, due to septic intoxication. Another case of ectopic gestation in this series is recovering —also a neglected case. It would tax the time of the Society too much to give a detailed account of the cases, though same would be of great interest.

Dr. Robert Casperson, of Camden, reports two cases of interest:

"*Case 1.*—Mrs. M. L. B. was treated in fall of 1896, for intestinal indigestion. The most prominent symptom was sharp lancinating pains, which seemed to rotate around umbilicus. The attacks were not continuous, there being at times a subsidence of all symptoms. They would recur at intervals of two weeks and a month, and were not alleviated by treatment. While treating a member of her family in 1898, she asked me the best relief for an acute attack of constipation; a laxative was prescribed, and when about to operate, the old indigestive pain, as she called it, was revived, but in a new location, which was well down in the rectum. She introduced finger into the bowel to see if she could touch the spot, and withdrew with her finger a badly rusted sewing needle with a fairly good point. She had never knowingly swallowed it.

"*Case 2.*—Mrs. V. L. W. consulted me concerning a leucorrhœa. An astringent was prescribed which diminished discharge, this result to be followed by a dilution of the wash. In a few days she again consulted me, saying that she considered the astringent must be still too strong, as she had had for two days a sharp, sticking pain, which she referred to the region of the perineum. On examination I introduced my finger in the rectum and came directly in contact with what seemed to be a pin, wedged across sphincter. Withdrawal proved it to be a pin. All disagreeable symptoms disappeared. This patient, also, had not been aware of having swallowed the pin."

c.—In memoriam. Henry A. M. Smith, M.D., born July 30, 1839; died March 29, 1899.

d.—To what extent is the Code of Ethics of the American Medical Association in operation today?

Dr. Alexander Marcy, Sr., of Riverton, writes as follows: "In regard to the ethical code of the American Medical Association, my belief and observation for forty years, as student and practitioner, is that it is a beautiful and lofty ideal to which all men in our profession should aspire and try to live by, as a rule of conduct. It might, it seems to me, be reduced to a simple formula which our Savior taught when on earth—namely, 'Do for and to others as ye would that they should do for and to you.' This golden rule would, if lived up to, regulate the actions of our own and all professions, as well as the relations of all mankind to each other, satisfactorily, but, alas! in all these forty years, I have never seen the spirit of that Golden Rule exemplified, except in a few cases, even when the letter of it has been attempted. Doctors, as well as all men, must learn to be unselfish if they would make the code of any value, and unselfish-

ness is very much 'agin natur'; yet it is a good ideal to work up to. As to what extent it is in operation, I should say it is a failure as far as perfection is concerned, but as much as we could expect under the present circumstances. Yet it exercises a sort of controling influence for good."

Dr. H. F. Palm, of Camden: "The operation of the Code of Ethics in our city is very limited. It is frequently violated by the older members of the profession, but acts as a restraint and menace to the younger practitioners. I consider the Code of Ethics to be a very valuable document. Without it, the practice of medicine in this community would be even more deplorable and aggravating than it is now."

Dr. W. P. Wingender, of Camden, writes: "The Code of Ethics is all right, but because of too great leniency with those who palpably overstep its bounds it has degenerated into a farcical document of no practical importance."

Dr. W. G. Bailey, of Camden, writes: "My opinion of the Code of Ethics—no good; it is a fake. A very good thing in a society where the membership numbers about two."

Dr. Marcus K. Mines, of Camden, believes that the Code of Ethics, as far as its operation in Camden is concerned, is a myth.

Dr. Joseph L. Nicholson, of Camden, writes: "The Code of Ethics is closely observed by all the physicians with whom I come in contact, except in regard to fees for professional services and medicine. With our varied classes of patients, perhaps, it cannot be avoided."

Dr. F. W. Marcy, of Camden, writes: "To what extent is the Code of Ethics in operation today? As far as my knowledge goes, with my short experience, I should

say that in Camden it is not in operation at all. There is no doubt but what it would be a grand, good thing if lived up to."

Dr. Joseph H. Wills, of Camden, writes: "The Code of Ethics, it appears to me, is efficient mostly upon those of the medical profession who, from their high sense of honor alone, would act like gentlemen towards their fellow-practitioners. It seems, like the oath in law, binding only on such persons as would tell the truth from a high sense of duty, without the administration of an oath."

Dr. John W. Marcy, of Merchantville, writes: "As for the Code of Ethics, I think it is in operation to only a very limited extent. It strikes me that the Code is in about the same relation to the medical profession as many of the so-called blue laws are to the State. It exists, but from long disuse has undergone a process of atrophy, to such an extent that if I did not know that all regular physicians are guided by its rules, I should never know that it was still in force. Or, perhaps, to make my idea a little more plain, it is in force against the fellow who is caught breaking its rules, but the very men who would most severely punish the offender will not for one moment hesitate to smash all its rules whenever the shadow of a dollar appears on the other side of that line beyond which the code says we must not go.

Dr. Alexander McAlister, of Camden, writes: "The Code of Ethics of the American Medical Association is in operation to some extent. There is among some members of the profession a positive antagonism to the Code of Ethics. That antagonism had its origin in some place, in some influence which was generated either by teaching or from observation, and local medical societies and medical colleges are, in a great measure, responsible

for the existence of that unbelief. Like other evils, it will cost many times more to uproot it than it would have cost to have seen to the sowing of clean seed in the start. Recently a physician was summoned before a medical society for an offence, and he informed that body that he had never seen a copy of the Code of Ethics, and upon further inquiry there was only one or two copies to be found among the members of the society. There was an air of serenity about the offender which betokened a feeling of self-satisfaction within, and as he stood in contemplation of the example of a self-made ethical physician which he presented to the society, the odds were, from his point of view, so preponderating against anything which the followers of the code could adduce, that the expression of his face showed commiseration for such a physician as had been under the dwarfing influence of the code. Not much can be done with such a man. Probably the easiest and best way is to leave him to the blissful enjoyment of his own code and company.

"There are other kinds of anti-code men, and anti-code men for other reasons. These men skirmish in their home societies during the year and then have their annual round-up at the annual meeting of the State Society or of the American Medical Association. There are all kinds of men at these meetings, and one class get so tired of the yearly resumé of the various astigmatic visions which the code reformers believe they have had during the year, that they say, 'for the sake of harmony, for the sake of peace, for the sake of what we came here for, give them what they think they want.' This class of men is loyal to the profession, to the code and to the American Medical Association who, because they have not much depth of earth (sand) when the heat comes, wither away and the no-codists have the aid of their votes.

"Other members, while not more loyal to the best interests of the profession, take life easier—that is to say, stand grief better, and upon the final vote good-naturedly vote 'no' and then dismiss the matter, as they should, from their minds until some one of the reformers proceeds to remove the dressings from the imaginary sore at the next session. This class of physicians appreciate the fact that the no-codists are equally as scientific physicians as are those who uphold the code. They know, too, that they themselves have hobbies, and if fifty or a hundred of them could but unite upon one particular hobby they could make life as much a burden for the members of the Association as the no-codists are doing, so they charitably accept the situation as being one of the afflictions to which humanity is incident, giving thanks that their own erratic ideas are of such a nature as to make a combination with other hobbies impossible.

"There always have been no-codists at the sessions of the American Medical Association and the no-codists emphatically assert that they are always going to be there, so it would seem that a meeting in which the code question would have no place upon the program is past praying for, and really to have the code regularly scheduled as the subject for the annual efferesence and deferescence is not the worst thing for the Association which can be thought of. Beside, it follows, by no means, that if the code question were strictly debarred from discussion there would be no time spent over Association rules and laws of government, because it is apparently the first thought of some men, as soon as they become members of an organization, to look in the Constitution and By-laws for something to amend or strike out, and it is better and safer for the Association, as now, to have a definite, well-understood subject the object of attack than it would

be to have the undictated imagination to find a wrong whose victims would be crying for redress.

Some, probably, are kept away from the meetings by what they feel to be an unbrotherly contention or a waste of valuable time, but quite as many others, if it were known that the code question would not come up before the session in any form, would stay at home, so that the effect upon the number of members in attendance is a stand-off.

"The code, like all other beneficial provisions, squarely antagonizes selfishness. There is a robustly modest denial of the existence of selfishness in any degree in some sections of the United States, but most men in their quiet moments can recall in some of their acts the workings of that subtle influence, and to such men the stimulation to greater carefulness which the code constantly begets, is an acknowledged help. Selfishness is, in a way, cunning. Our own selfishness often deceives our very selves. More often it is, indeed, that it blinds and deceives us than that others are fooled by it, hence it is that the easiest place to detect selfishness is in others. The Code of Ethics as it now exists is potent for good to the medical profession."

Dr. John R. Stevenson, of Haddonfield, writes: "Comparing my experience of the last thirty-five years with the present, it may be said that in this county, outside of Camden City, the code is in complete operation. In the early part of the above period, minor complaints of the unprofessional conduct of physicians were not infrequent; now they are rare. Not only members of our society conform to them, but non-members also. The code has become part of our social fabric. Formerly, patients became offended if we refused to violate it for their seemingly advantage; now, to pacify them we have only

to say that the rules of our Association prohibit us, because nearly every man and woman belongs to a society and have learned the need and value of the regulations imposed by them."

Dr. E. E. DeGrofft, of Camden, writes: "I will say that my observation has been that, unfortunately, the code, to a very great extent, is sadly neglected and ignored, and by those, too, who are prominent in the profession. Our profession is a noble one and why will not physicians hold up its standard at all times and be honest and act honorably toward each other? But, sad to say, a large percentage do not do so. They will accept any and every call, matters not whether the attending physician has been discharged or not. I have known that where a patient had been sent to a hospital by the family physician, that the attending physician of the staff at the institution did, when the patient had sufficiently recovered to be removed to her home, insist upon attending the patient, even during convalescence. There is certainly room for improvement; so not only let us meet each other with outstretched hands in society assembled with pleasant fraternal greetings, as is our custom, but grant that we may speak kindly of our brother-practitioner to others in his absence, and thus adhere to the Golden Rule."

Dr. Joseph S. Baer, of Camden, writes: "In reference to the Code of Ethics, would say that it is still in existence wherever gentlemen exist, and can never be discarded any more than can the ten commandments."

JOHN G. DORON, *Reporter.*

CAMDEN, N. J.

OSTEOPATHY.

BY E. L. B. GODFREY, M.D., CAMDEN, N. J.

From the dawn of the healing art, through the long ages of dogmatism and empiricism, to the rise of the rational practice of scientific medicine, there has always existed by the side of the skilled and honest physician, the ignorant and fraudulent practitioner of systems, "pathies" and "issues," who unhesitatingly plays upon the credulity and weakness of the unlearned laity for his own financial profit, and to further his selfish ends.

Under many varying names, and with widely different methods, these fraudulent systems have appeared and flourished for a time, but based upon false principles, they have unfailingly withered under the application of the "Ithurial spear" of science, and have ultimately vanished into the limbo of forgotten quackery and medical absurdities. Each has its brief day of success, during which it seems to become more or less firmly established in popular favor, and to successfully defy, for a time, the mandate of the law. But the day of retribution soon follows, and it behooves the regular profession to see that the laws of the State are duly enforced against these frauds, and that charlatans and quacks, who profit at the expense of the public health, should reap the bitter fruit of the seeds they have sown.

The latest of these fraudulent systems to attain the proportions of a popular fad, and to attempt to establish itself in our midst, is the one known as "Osteopathy," in comparison with which all other "pathies" shine as radiant stars. Let me so far trespass on your indulgence as to consider this absurd delusion from the standpoint of: (1) What osteopathy claims to be; (2) What it really is; (3) Its legal standing in New Jersey.

1. What osteopathy claims to be:

Osteopathy, as claimed by its adherents, was discovered by a Dr. Still, of Kansas, in 1874, who, according to his own words, reasoned as follows: "A natural flow of blood is healthy; and disease is the effect of local or general disturbance of blood; that to excite the nerves causes muscles to contract and compress venous flow of blood to the heart; and the bones could be used as levers to relieve pressure on nerves, veins and arteries."

This extraordinary reasoning to educe a basis for a system of medicine, evidences the shallowness of the author.

The scientific definition of osteopathy, given by its adherents is as follows: "Osteopathy is that science which consists of such exact exhaustive and verifiable knowledge of the structure and functions of the human mechanism—anatomical, physiological and psychological—including the chemistry and physics of its known elements, as have made discoverable certain organic laws and remedial resources within the body itself, by which nature, under the scientific treatment peculiar to osteopathic practice, apart from ordinary methods, of extraneous, artificial or medicinal stimulation, and in harmonious accord with its own mechanical principles, molecular activities and matabolic processes, many recover from displacements, disorganizations, derangements and consequent disease, and regain its normal equilibrium of form and function in health and strength."

Just what this verbiage means it is difficult to say. It is a juggle with words and defines nothing. If the skill of this literary acrobat is intended to bewilder and deceive the average laymen, the system has prospects of success.

In practice, the osteopaths claim that they do not use drugs or the knife and that their system is purely a mechanical manipulation. It is claimed that "Osteopathic practice is based upon anatomical order. Order in the body is dependent upon the bony frame-work, and all anatomical relations are determined by the position and proper adjustment of this frame-work. The blood flow, which carries the essential current of vital nutrition, is not likely to be obstructed in the softer tissues of the body; nor is the nervous system. But where arteries, veins, lympathic vessels and nerves pass between or near bones, they are most likely to be interfered with; and here is where we first look for cause of disease. To restore order to a disordered body, the bones are used as mechanical appliances to relieve pressure on nerves, arteries and veins, thus resulting in freedom of flow in all life's forces and fluids. This new science is further based upon the fact that all disease, whether of the nature of an anatomical lesion or a physiological derangement, may be correct by an intelligent use of the laws of nature, as operative in human body, without the use of artificial aid, whether medical or electrical."

This system of osteopathy does not appear to apply to surgery or to operative cases, the results of which the laity are quick to recognize.

Osteopaths state that the healing powers of Nature are "involved in the profoundest physiological mystery," yet claim their ability to use them intelligently in the cure of disease, so that all forms of medication are unnecessary; they claim to cure eighty per cent. of incurable diseases, yet take pains not to give the percentage of patients cured of fatal maladies, and they further claim, as of vital importance, that "all bodily action is under the control of the nerves; all nerves are under the control of the brain; the brain is under the control of the mind."

Admitting the truth of these propositions, it may be asked, who or what controls the mind? Is it the will of the patient or the will of another person, or suggestions from without or within? If the mind is the ultimatum of osteopathy, the system does not materially differ from hypnotism, faith-cure, mind-cure, etc., etc., and sifted to the bottom, osteopathy, which claims to control the nerves through the brain, is nothing more or less than a form of mind-cure, coupled with a form of massage.

2. What osteopathy really is.

Osteopathy is admitedly a "pathy," or limited system of treatment. The science of medicine does not recognize any limited or restricted system of treatment as a legitimate system. The moment a medical truth is adopted as a "pathy," it is torn from its scientific relation to other truths and becomes an empirical dogma, subject to the wildest perversions of crude experimentalists. The true system of medicine and surgery is progressive; it is unrestricted and unlimited in its scope; it is confined to no "pathy," "ism" or dogma; it gladly employs for the relief of mankind, "all the powers that God and nature have placed in its hands."

Ever since the days of Hippocrates, the science of medicine has adopted every true advance in medicine and its collateral branches, and has successively embraced the principles of inoculation, vaccination, anæsthesia, antiseptics, antitoxin, the X-Ray, massage, and welomes the promise of the future. Not one of these advances, though useful in itself, could serve alone as the basis of a system of medicine. The only system of medicine that can stand the test of time must be as broad and liberal as creative power.

Osteopathy is a combination of mind-cure and massage, and anyone who promulgates its claims to cure eighty per cent. of incurable diseases, is either ignorantly or willfully deceiving the public. As such,

he is an imposter and amenable to our laws. The system gives the impression of a business enterprise, undertaken for purely selfish and speculative purposes and, as has been said, is nothing more or less than a form of mind or faith-cure, coupled with massage.

3. What is the legal standing of osteopathy in New Jersey?

It is claimed that osteopathy does not come under the provisions of the medical law of New Jersey, for the alleged reason that its adherents do not administer drugs, nor use the knife, but claim to use only mechanical manipulation in the treatment of disease. The eighth section of the act governing the practice of medicine in New Jersey states: "That any person shall be regarded as practicing medicine or surgery within the meaning of this Act who shall use the words or letters 'Dr.,' 'Doctor,' 'Professor,' 'M.D.' or 'M.B.' in connection with his or her name, or any other title intending to imply or designate him or her as a practitioner of medicine or surgery in any of its branches, and who in connection with such title or titles, or without the use of such titles, shall prescribe, direct, recommend, advise, apply, give or sell, for the use of any person or persons, any drug or medicine, or other agency or application for the treatment, cure or relief of any bodily injury, infirmity or disease; and it is further provided, that the use of any one of the afore-mentioned titles, or the exposure of a sign, circular, advertisement or any other device or information indicating thereby the occupation of the person or persons, shall be considered prima facie evidence; and it is further provided, that the provisions of this Act shall apply to all persons professing and attempting to cure diseases by means of the so-called system of 'faith-curism,' 'mind-healing,' 'laying-on-of-hands' and other similar system."

It is thus seen that the practioners of osteopathy are clearly amenable to law. It only remains for those who possess a personal knowledge of their specific acts of the infraction of the law to make complaint in due form to the prosecuting authorities of the county in which the violations of the law are taking place, in order to secure their arrest, conviction and punishment. In several recent instances, the courts have upheld the present medical act, especially in Essex and Passaic counties, and should the profession actively support the efforts of the State Board of Medical Examiners, it would soon become unprofitable and dangerous for medical quacks and imposters to linger within the borders of our State.

CAPE MAY COUNTY.

To the Chairman of the Standing Committee, &c.:

Not having heard from any of the members of the society, I can send in no detailed report. The only epidemic this year was one of "grip'" during the winter months. In my practice these cases were attended with great prostration, but as a rule the epidemic was not as severe as the one several years ago.

Very truly yours,

CHARLES B. CORSON, *Reporter.*

CUMBERLAND COUNTY.

To the Chairman of the Standing Committee, &c.:

Four regular meetings of the Cumberland County District Medical Society have been held during the year, as usual, the discussions on each occasion having been timely, interesting and instructive. The subject, "Nephritis in Children," was thoroughly discussed in a paper by Dr. T. G. Davis, of Bridgeton, in which he claimed that Basham's Mixture had been a useless remedy in his hands and that he had wholly discarded its use for other more valuable remedies. A paper on "Peritonitis" was read by Dr. L. H. Hummel, of Greenwich. This paper and the discussion following it brought out many valuable points in the management of this always serious and often fatal malady.

A most valuable paper on "Conservatism in Gynecology" was read by Dr. Charles P. Noble, of Philadelphia, which was thoroughly appreciated. Dr. M. K. Elmer, of Bridgeton, read a paper, entitled "Serum Treatment of Tuberculosis," in which he claimed the

practice to be very important from a diagnostic standpoint, but that he was not prepared to claim any curative value except in the very early stages of the disease. A paper by Dr. E. S. Fogg, of Shiloh, on "Heart Stimulation," was read, in which he dwelt particularly on the use of strychnia in large doses. Dr. Joseph Tomlinson, of Bridgeton, read a paper on "Individualism in Medicine," in which he condemned the indiscriminate use of tablet triturates and urged more accurate prescribing and the avoidance of ready-made formulæ. Dr. Ellsmore Stites, of Bridgeton, reported two cases of abdominal sections, exhibiting specimens. Both cases were operated on successfully under most unsatisfactory conditions and surroundings, in the absence of any hospital technique. He would not advise it as routine practice, but believes that many cases can well be operated upon at home, and that, too, by the family physician, with a considerable degree of safety.

Dr. Hamilton Mailly reports the following interesting case of infantile scurvy, which develops a new thought relative to infant feeding: A child six months old, fed exclusively on boiled milk combined with an albuminized food, developed the symptoms of scurvy so gradually that it was only after the trouble reached an alarming stage that the real causal factor was appreciated. Happily, a correct food supply was given in time to avert the threatened death. A similar case occurred under the care of another physician in exactly the same circumstances.

The extraordinary care now given to infant feeding, the multiplicity of prepared foods and the habit of boiling the milk, it seems to me, is likely to swing the pendulum away from the primary digestive diseases to those secondary disorders of assimilation. The temporary use

of boiled milk or of some prepared food may be quite right, but the persistent use is likely to end in some nutritional disorder like scurvy or marasmus.

Regarding the question, "To what extent is the Code of Ethics of the American Medical Association in operation today?" there seems to be but one opinion, that it is not, as a rule, lived up to.

Dr. Mailly looks upon the question as a difficult one to answer. Speaking for our own society, he believes its operation broad and its influence wholesome. There is a point not asked for in the question, but very pertinent, it seems to me, for it determines in large part the operation of the code in the precise meaning of the code. He further states "that if, by any means, we could all agree as to just what contitutes a fit associate, I think we shall have gone a long way toward that universal acknowledgment of the code which we all hope for."

Dr. T. G. Davis believes that more of the sections are violated than are observed and that those who talk most of the code observe it the least.

Dr. M. K. Elmer regards the subject a very important one and does not think the members of our society feel bound to carry out the code.

Dr. Snyder: "As to the extent the Code of Ethics of the American Medical Association is in operation today, would state my belief that it is, perhaps, more lax than in former times."

In the opinion of Dr. Oliver, the Code of Ethics of the American Medical Association is violated, both in spirit and letter, by the great majority of the members of affiliated societies, and more particularly is this fact noticeable in those members who reap the greatest benefit from their affiliation with medical societies.

Dr. Stites is of the opinion that unless several portions

of it are expunged, conservatism will compel us, sooner or later, to use the pruning knife in some of our societies. "Code" and "ethics" have not the significance with which they impressed him earlier in his medical career. One can follow in the footsteps of some of our older and professed adherents of the code and yet be far from the "straight and narrow path."

Dr. Wade: "Regarding the Code of Ethics, my opinion is that so far as the members of the profession in Millville are concerned, with but few exceptions, there never has been, is not at present, never will be a Code of Ethics in existence. The practice of medicine has descended to a business." In his town he states that bids are made for services, offering to attend the cases for half fees, in order to obtain practice.

Dr. H. W. Elmer looks upon the subject as a peculiar one and difficult of discussion, and thinks it is fairly well observed with us. He is not so sure but that the code might be altered so as to be more in accord with the modern line of practice, but the danger would be of too much laxness than of too great strictness in its observance.

Those elected to active membership during the year were: Drs. H. G. Miller, of Millville, and G. B. Cunningham, of Vineland. To associate membership, Drs. Chas. P. Noble and H. A. Hare, of Philadelphia.

Death has claimed none of our members during the past year.

No epidemics of any moment have occurred during the year to the knowledge of your reporter, excepting the prevalence of "la grippe" and the usual run of coughs, colds, consumption and exanthemata, and no further reports to that effect have been received. Too great importance cannot be given to the establishment of pre-

ventive measures for the steadily increasing death-rate in our county from tuberculosis, or, to use the broader and more indefinite term so frequently made use of in death reports, consumption. Thirty per cent., or nearly one-third of the deaths in my individual practice during the past year, have been from this cause.

While it is true that inheritance plays a most active part in the causation of consumption here, as elsewhere, it is also true that tuberculous cattle may be the cause, very frequently, of the production of this disease, especially in children. One farmer alone, in Fairfield township, has lost fifteen head of cattle in five years and has been unable to raise a heifer, with the best of care, to the end of the second year. Three children who drank freely of milk from this herd, before it was discovered by the attending physician that the cows were thus dying, developed symptoms of tuberculosis—one very marked, with but slight abatement after a year's treatment; two, at the expiration of nine months, still cough, expectorate and have all the symptoms in a milder form. A number of cattle in the vicinity of the farmer mentioned have died during the past five years, undoubtedly from tuberculosis, one dairy herd having been killed outright by the State Board of Health. It is a question in the mind of your reporter as to whether isolated cases do not exist more or less constantly throughout the southern end of the county. The coöperation of the individual physician and the medical society, with the State Board of Health, it seems to me, might do much in suppressing this ever increasing malady.

Our society has been greatly improved during the past year by the advantage of interchanging cordial relations between our sister societies, and the other societies have, no doubt, been brought to know us better. The spirit

of enthusiasm and progressiveness has been evident throughout.

By far the most important event of the year was the celebration of the eightieth anniversary of the organization of the society, on December 8, 1898. The event was successful in every sense of the word, and one which will mark an epoch in the history of the society heretofore unsurpassed. The birthplace of the late Professors Geo. B. Wood and Theophilus Parvin was Cumberland County, and one of the interesting features on the occasion of this eightieth anniversary was a toast, "Landmarks of Cumberland County," responded to most appropriately by Prof. H. C. Wood, of Philadelphia. The programme, together with a report from the committee, appears elsewhere.

J. C. APPLEGATE, *Reporter.*

BRIDGETON, N. J.

BRIEF ACCOUNT OF THE CELEBRATION OF THE EIGHTIETH ANNIVERSARY OF THE DISTRICT MEDICAL SOCIETY OF CUMBERLAND COUNTY.

The Cumberland County Medical Society, at its October meeting, 1898, appointed Drs. Ellsmore Stites, D. H. Oliver, J. C. Applegate, Joseph Tomlinson and H. W. Elmer as a Committee of Arrangements for the purpose of celebrating its Eightieth Anniversary, which occurred on December 8, 1898.

Through the hearty co-operation of our own members, kindly assisted by our visiting friends (of whom we will make special mention), we were able to plan and consummate a program most pleasing and instructive to us all. The afternoon session, devoted to the literary program, was held in the chapel of the First Presbyterian Church, and was opened with prayer by the Rev. S. W. Beach, and followed by an address of welcome by Dr. W. L. Newell, of Millville. "Eighty years ago," he said, "nine earnest and sincere gentlemen met together for the purpose of organizing themselves into a society.

Their first President was Dr. Ebenezer Elmer; Vice-President, Dr. William B. Ewing; Secretary, Dr. Enoch Fithian." Dr. Newell, in a few apt and well-chosen words, assured our visiting brethren that they were in the house of their friends, and to conduct themselves accordingly. In closing, he said, "I wish to say that the Mayor has kindly stated that he offers you the city to do what you like with it, and he also bids you welcome."

The response was made by Dr. W. E. Ashton, of Philadelphia, who represented our out-of-town friends, and very fittingly reminded the society of their warm appreciation of its extended courtesies, as shown by the large number present. "These societies," Dr. Ashton stated, "are the bone and sinew of the profession; they keep our medical brethren fully abreast of the times and tend to soften those jealousies which are bound to occur, and thus cement all into an homogeneous whole."

Dr. Ashton, after noting the advantages derived from country practice, etc., concluded his address as follows: "It is pleasant for us, who are from another State, to be welcomed so generously by you today, and to be made to feel that the brotherhood of our profession is not an empty theory, but a certain and veritable entity. But we would expect no less from the profession of our sister State of New Jersey, a State which has always, in the past history of our country, stood in the front ranks of the sisterhood of States; I believe and feel that never in the history of our country have we been a more united people. This feeling of patriotism and good fellowship must have its effect upon our profession. It will tend to bring us closer together, to make our interests more mutual, and to view with a more kindly feeling those short-comings which are so natural to humanity."

Dr. F. M. Bateman, of Cedarville, then gave the historical address, and what ordinarily would have been a dry and tedious discourse, proved to be a short, concise history of the society, so arranged that the subject matter was most interesting and its delivery most entertaining.

Dr. Ernest La Place, of Philadelphia, then gave a practical demonstration of his new forceps for intestinal anastimosis, which proved of very great interest to all. The simplicity of his invention, and the ease with which it was applied, made its superiority most apparent and only still further verified the genius of its inventor.

Dr. H. A. Hare, of Philadelphia, then read a series of papers, with titles as follows: "Pericardial Effusion; Its Diagnosis and Treatment"; "Errors in Therapeutics"; "The Diagnosis of Acute Tubercular Infection from Pneumonia and Typhoid Fever." To attempt to describe in detail, or even hint at the salient points brought out in these papers, would be impossible in a report of this kind, but suffice it to say, it was an intellectual treat to all who had the good fortune to hear them.*

Dr. John B. Deaver, of Philadelphia. then read a paper, entitled, "Surgery of the Hepatic Ducts. This was delivered in his usual bright and entertaining manner and proved to be a valuable and instructive dissertation. Many valuable suggestions were given, especially his differenciation of the many and varied abdominal pains, citing a number of cases. The subject matter of his paper, together with his black-board description, showed that it came from a mind long trained by experience and close observation.

Dr. David Riesman, of Philadelphia, read a paper entitled, "Internal Secretions."† This paper can only be read and studied to be appreciated. It showed at once that its writer had not contented himself with the surface play of his subject, but had delved into its depths. For elaborate scientific research it was the most complete exposition of the subject that they had ever had the pleasure of listening to.

After a short recess, a reception was held at Hotel Cumberland in the evening, the parlors of which had been most beautifully and tastefully decorated and there, amid music and flowers, old acquaintances were renewed and many new ones formed. It was a gala day for old Cumberland, and one that will long be remembered. At nine o'clock P. M., our own members, wives and sweethearts, together with visiting friends, professional and otherwise, numbering ninety-five, were seated in the banquet hall, and after prayer by Rev. S. W. Beach, we sat down to the following menu, which was one most pleasantly served:

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* Dr. Hare's address appeared in the *Therapeutic Gazette*, Feb. 15, 1899, and in the *Journal of the American Medical Association*, March 18, 1899.

† Dr. Riesman's paper was published in *Phila. Med. Record*, Feb. 4, 1899.

MENU.

Blue Points.
Consomme a la Royale.
Celery. Olives, Salted Almonds, Gherkins.
Dressed Snapper a la Delmonico.
Potatoes Hollandaise.
Cutlet of Sweetbread a la Reine.
Filet of Beef, "Larded," Madeira Sauce.
French Peas, Potato Croquettes.
Punch a la Cumberland.
Roast Grouse. Sur Canape.
Lettuce. French Dressing. Currant Jelly.
Chicken Salad.
Peach Sorbet. Neapolitan Ice Cream.
Fruits. Nuts. Assorted Cakes.
Brie, Roquefort, Neufchatel Cheese.
Coffee. Cigars.
Bray's Grape Juice. Ginger Ale.
Poland Effervescent Water.

At the close of the dinner, Dr. H. W. Elmer presiding, numerous toasts were called.

The first toast responded to was "Landmarks of Cumberland County," by Prof. H. C. Wood, of Philadelphia. We would not attempt to mention the many bright and witty sayings with which we were entertained, but we do feel like making special mention of the manner in which he eulogized some of our old land-marks, *i. e.*, Drs. George B. Wood and Theophilus Parvin, both residents of Cumberland County during the early portion of their lives. It was, indeed, an appropriate subject for the occasion, and Dr. H. C. Wood, was the proper man to respond, being a nephew of Dr. George B. Wood, and thoroughly familiar with this locality.

The next toast, "Ex-Members," was responded to by Dr. Charles C. Phillips, of Deerfield, who is now an ex-member, but originally a charter member, there being only two now living—Dr. Phillips and Dr. Eph. Bateman, of Cedarville. Dr. Phillips feelingly touched upon our society's organization, its early members, how they labored against great odds, and recalled many events which still further fortified our belief that the organization of Cumberland County Medical Society was, indeed, an event worthy of commemoration.

Dr. W. H. C. Smith, of Millville, then responded to the toast, "Our Wives," and in his usual bright and witty manner, indelibly fixed upon our minds the fact that, not only wives, but sweethearts, are of some consequence and worthy of some consideration in the practice of medicine, as well as in other pursuits of life.

Prof. J. Chalmers DaCosta, of Philadelphia, then responded to "Characteristics." Should no comments be made, the subject or speaker would not suffer in the least, for all present were so impressed with both, that even the ravages of time will not efface them from our memories. Such a combination of wit and wisdom, it is seldom our pleasure to hear. It was a rare treat, for able critics say that Dr. DaCosta is destined to become one of the most clever speakers of the age.

Dr. H. A. Hare responded extemporaneously to the toast, "Honorary Members." It was an appropriate subject, and the usefulness of such members was made very apparent at this particular time, all responding to our call for help, and without which we should have been handicapped. His address was entertaining to the extreme and filled a niche that up to that time had been overlooked.

"Our Sister Societies" was responded to by Dr. E. L. B. Godfrey, of Camden. He very ably discussed the relationship that should exist between neighboring societies, spoke of reciprocity, etc., and made many timely suggestions that could well be made use of to the advantage of society work. It was to the point and appreciated by all.

This ended the program of the celebration, and we acknowledge our obligations to all those who were in any way associated with us in the work, and who contributed in any way to making this a successful occasion.

Our guests and members from Philadelphia and vicinity were conveyed to their homes by a special train courteously furnished by the West Jersey & S. S. Railroad, leaving Bridgeton at 12 M., while the Millville & Bridgeton Traction Company furnished a special service over their line for the accommodation of those living at Millville.

THE SOCIETY WAS HONORED BY THE FOLLOWING GUESTS WHO ALSO ATTENDED THE BANQUET.

Prof. W. E. Ashton, Prof. James M. Barton, Prof. J. Chalmers Da Costa, Dr. David Reisman, Dr. C. P. Noble, Prof. H. C. Wood, Dr. Geo. E. Shoemaker, Dr. John B. Deaver, Prof. H. A. Hare and Prof.

Ernest LaPlace, of Philadelphia; Drs. E. L. B. Godfrey and E. E. DeGrofft, of Camden; Dr. Chas. C. Phillips, of Deerfield; Dr. G. M. Paullin, of Shiloh; Drs. B. A. Waddington and W. H. Carpenter, of Salem; Dr. W. H. James, of Pennsville; Dr. Geo. E. Reading, of Woodbury; Dr. Luther M. Halsey, of Williamstown; Dr. Harry A. Stout, of Wenonah; Dr. and Mrs. Julius Way, of Cape May Court House; Rev. and Mrs. S. W. Beach, Prof. and Mrs. P. Lyon, Prof. and Mrs. H. K. Trask, and Dr. John H. Moore, of Bridgeton.

THE FOLLOWING MEMBERS OF THE SOCIETY WERE PRESENT, MOST OF WHOM WERE ACCOMPANIED BY THEIR WIVES OR LADY FRIENDS.

Drs. E. B. Sharp, of Camden; J. Rulon Dare, of Sunbury, Pa.; E. S. Fogg, of Shiloh; L. L. Hand, of Leesburg; N. H. Burt, of Fairton; S. T. Day, of Port Norris; A. R. Judson, of Newport; S. M. Snyder and L. H. Hummel, of Greenwich; E. Bateman and F. Bateman, of Cedarville; H. G. Miller, G. E. Day, J. W. Wade, W. H. C. Smith and W. L. Newell, of Millville; C. W. Wilson and O. H. Adams, of Vineland; T. G. Davis, Alfred Cornwall, Ellsmore Stites, Jos. Sheppard, T. J. Smith, J. R. C. Thompson, M. K. Elmer, D. H. Oliver, Jos. Tomlinson, Hamilton Mailly, H. W. Elmer and J. C. Applegate, of Bridgeton.

GLOUCESTER COUNTY.

To the Chairman of the Standing Committee, &c.:

The Gloucester County Medical Society has held five regular meetings during the year, all of which have been largely attended by its members and delegates from Cumberland, Salem and Camden Counties. The November, January, March and May meetings were held at the regular place, in Woodbury. The September meeting, being the celebration of the eightieth anniversary of the society, was held at Wenonah Inn, Wenonah, N. J.

At the January meeting, Dr. Husted, of Clayton, read an essay on "Measles and its Complications."

Epidemics of influenza, pneumonia, mumps, whooping-cough and typhoid fever were reported during the year, with an exceedingly low mortality.

Dr. H. M. Halsey, of Williamstown, reported twenty-two cases of pneumonia, without a death. The two worst cases he bled freely; in the balance, veratrum viride with ipecac was used in the first stage, followed by supporting treatment.

Dr. Stout, of Wenonah, reported a fatal case of epidemic cerebro-spinal meningitis which pursued a typical course, terminating fatally on the fourth day.

Dr. Edwards, of Williamstown, reported a case of laudanum poisoning, nearly two ounces being taken. He gave an emetic of zinc sulphate, which was successful, as well as hypodermics of potassium permanganate, and coffee by the mouth. Recovery followed.

Dr. Hunter, of Westville, reported a case of a woman, aged 72 years, who had a chill, fever and sweat occurring every second day. Chills were broken by quinine. Three weeks later had dizziness and began to have clay-colored stools and was jaundiced. Case was rapidly fatal. Post-mortem revealed carcinoma of the liver which had closed the common bile duct. Also found forty-eight gall stones in a cyst.

WILLIAM BREWER, *Reporter.*

A Case of Imperforate Rectum.

BY GEORGE EVANS READING, M.D.

On April 14, I delivered Mrs. Sarah M. R——, of a healthy female child, which was apparently normal in every respect. The next day I found that the child had had no operation from the bowels. The same report was given me by the nurse upon my next visit. The child did not seem to be suffering any discomfort; but I ordered a dose of sweet oil. The next day there had still been no passage and

I made up my mind that there must be some mechanical obstruction. Upon trying to pass a probe into the rectum, I found that it would only enter three-quarters of an inch. I then introduced the end of my finger and found that the passage from the anus ended in a cul de sac, the bottom of which felt solid to the touch, and there was no bulging when the child cried, showing that there must be a considerable amount of tissue between the end of the cul de sac and the colon. I informed the family of the condition of things, but could not get their consent to operate until evening. I operated the next morning, Dr. Brewer giving the chloroform.

I determined to try to reach the bowel from the anus in spite of the apparent thickness of the tissues separating the two ends of the bowel. To secure room I made an incision through the spincter, posteriorly. I then passed a broad director up to the top of the cul de sac, and using this as a guide, I passed a bistoury upwards and backward toward the hollow of the sacrum. I had gone so far as to almost have decided to abandon the attempt, when I felt the resistance to the knife cease, and, upon withdrawing the director and knife, some meconium was discharged through the opening. I then introduced my index finger and enlarged the opening. I continued to pass my finger into the bowel once a day for some days. I then made a bougie of the proper size and taught the nurse how to pass it.

The child has grown and seems to be very little the worse for the troubles it has passed through.

PROCEEDINGS OF THE GLOUCESTER COUNTY MEDICAL SOCIETY, HELD AT WENONAH INN, WENONAH, N. J., ON THURSDAY, SEPTEMBER 15, 1898.

The President, Dr. George C. Laws, called the assembly to order at half past two, and Rev. Mr. Eckersley opened the exercises with prayer:

"Almighty and eternal God, blessed and omnipotent, author of life, giver of all good, fountain of all happiness, we invoke Thy presence upon this occasion, thanking Thee for the mercies we have received. May we never, in all our lives, be without the overshadowing presence of the Almighty. Go with us up and down in life, and in the doing

GLOUCESTER COUNTY MEDICAL SOCIETY.

of life's business, in the performance of its duties. Help us, that we may do them all with honor, with moral dignity, conscious of our integrity before Thee, knowing that our purpose is pure, that our motives are honorable in Thy sight. Animate us, we pray Thee, with the spirit of trust; fill us with the grace that is in Christ Jesus, and open us to every consideration that may elevate us to a life that is in Thee. Save us from the evil that may come upon us; deliver us from temptation; guard us from danger. Surround us in the solitary paths. Help us that we may bear our burdens nobly and manfully, that we may push irresistibly and steadily on through every storm and difficulty, and never fail to find the bridge that God has thrown over every inaccessible place and difficult river; and so be Thou our guide, oh, Thou great Jehovah, until at last, when Thou shalt have kept our eyes from tears, our feet from falling and our souls from death, Thou shalt have brought us to the eternal kingdom of God. We ask these favors through Jesus Christ, Amen."

Hon. A. W. Carey, Mayor of Wenonah, was introduced and made the following address of welcome:

"*Mr. President, and Gentlemen of the Gloucester County Medical Society:*

"As the representative head of this community, I am glad to welcome you here upon this, the eightieth anniversary of your organization. It is needless to say that there is not, today, one living charter member of this society, but this gathering is an evidence that their efforts to elevate the profession, and thereby benefit humanity, were not in vain. You, today, are carrying out their purpose, broadened and deepened by better knowledge which has come through the interchange of thought and experience in the healing art. I recognize the honor conferred on me in being permitted to occupy this position upon an occasion which has assembled so many learned and distinguished gentlemen, and I very much regret my inability to fittingly address you as a body of professional men. That, however, you would hardly expect from one of the laity. I can only assure you, gentlemen, of my sincere regard for the medical fraternity, and say to you that there is no obligation in life that I discharge with greater pleasure than paying a doctor's bill. So I am sure you will recognize me as a friend and accept the welcome so lamely, nevertheless cordially, tendered. On behalf of the citizens of this borough,

I bid you, gentlemen, and all the friends here assembled, a most hearty welcome to Wenonah, and I trust that your conference here may be one that shall give you delight to recall in all the years to come."

Dr. Mordecai Price, of Philadelphia, in response, said:

"*Gentlemen of the Gloucester County Medical Society:*

"Welcome! There is no one more consciously welcome than the physician. He is always welcome in the homes of those he is called upon to attend—thrice welcome. Probably no one is ever received with more heartfelt gratitude and welcome than is he, and I honestly believe he deserves it. I honestly believe that he goes with the firm intention of doing his full duty and of fulfilling his task to the fullest extent of his ability, and I know no portion of the profession better than I know those of the State of New Jersey, and particularly of this section of the State. And I can say with all true conscientiousness that they are men of the highest and most honorable attainments for work, with a fixed and determined purpose for the benefit of those who are thrown in their hands, and who are more or less at their mercy.

"Unfortunately, the people are not always the best judges of who is really the most capable of taking care of them, and I will say this for the New Jersey physicians with whom I have been thrown in contact, that they are away up to the standard; and while they cannot always be able, as most of us are not, to deal with all that they meet, yet they are conscious of the fact, and when they do need help they are willing to admit it; and there is no situation in our profession where a higher sense of honor and duty comes in than in just this position.

"None of us are perfect in every department of any science, or of any art, or of any mechanics. Therefore, there are always times when one is compelled to call to his assistance his brethren in the profession to aid him in directing a case; and I must say this of the New Jersey practitioners, that I have never yet seen them wrong. I suppose they do make mistakes, but if they do it has never been my experience to fall in with them, and I say this after a large experience in contact with these men.

"Now, in regard to the welcome of this afternoon, I have no doubt that we will do credit to New Jersey's reputation. I have no doubt we have all come here fully prepared to do justice to the good things

of the State of New Jersey, and I would therefore recommend that we, not only this afternoon, but for all time to come, determine to join honestly and faithfully in keeping the profession thoroughly united, thoroughly associated with each other, for just in such an association as this of today and in our meetings and societies as I have met them, and with the very same men that are here today, that we prepare ourselves for improvement in our profession that can in no other way be obtained. Let us wipe away the small bickerings and discontents and quarrels, and have a united profession, for only in this way can we be fully appreciated and fully do our great work as it is expected of us by the public-at-large; and they deserve our greatest care, they deserve our most earnest labor, because they fully welcome and trust us in their homes and confide to us the most sacred things of life, and if we betray them we can expect nothing except the most utter degradation and contempt."

Prof. James Tyson, of the University of Pennsylvania, was then introduced and gave an excellent and practical address on "The General Practitioner of Medicine."*

Dr. George C. Laws, of Paulsboro, N. J., President of the society, then delivered the following address on

GLONOINISM.

In undertaking the duty to which you were good enough to assign me, that of making a formal address at the eightieth anniversary of our society, my first embarrassment was the finding of a proper subject as the theme of my discourse. Of course, if I could only be bright and witty enough, a few generalities on our common experience as physicians would be sufficient, and possibly earn me a measure of applause. But our profession is a serious one; the purpose of our gatherings not merely that of good fellowship, but of mutual helpfulness in the lines of our high calling, and I felt that I would more dignify the office with which you have honored me if I made this the occasion of communicating some actual observations which would add even a very little to the sum of our medical knowledge and experience. I am aware that the conditions which lie at the basis of these observations are not likely to be met with in the usual practice; and yet I am sure that if these are thoroughly

* Published in *The University Medical Magazine*, for October, 1898.

studied and understood, they may help us in reaching conclusions of practical use in far different and wider fields. With this as an apology, I venture to ask your attention, for a brief time, to the following results of a rather prolonged observation.

In 1880 a large manufactory of nitro-glycerin and its compounds was established on the banks of the Delaware, near Gibbstown, three miles from Paulsboro, the place where I reside. Since that time many of the workmen and their families have been my patients, and I have had ample opportunity for observing the effects of this material on the systems of those brought in contact with this substance and working in this factory. For the past eighteen years I have had two classes of patients, viz., those whose physical conditions are affected by nitro-glycerin and those who are not; and the treatment required in almost any form of disease is materially different in either case. In order to properly understand the conditions produced in the systems of those engaged in this form of industry it will be necessary to say a few words about the nature of the substance, the mode of its manufacture, and that of the explosive materials of which it is the principal ingredient.

Nitro-glycerin was discovered by Sobrero in 1846, and was afterwards investigated by Railton and De Vrij. It is a heavy, pale yellow fluid, specific gravity 1.6, odorless, slightly soluble in water, and soluble in alcohol. It is formed by the action of concentrated nitric acid on glycerin, in the presence of strong sulphuric acid, at a low temperature. It is also called glonoin, trinitrin and propenyl nitrate. It is the principal ingredient in nearly all the high explosives, such as dynamite, Judson powder, explosive gelatine and the material used in submarine mines, and enters largely into the composition of smokeless powder.

Chemically it is an ether, being produced by the action of an acid —nitric—on an alcohol—glycerin. It is used medicinally in minute doses; in large doses it is an acrid poison. In the process of making it, a large iron, tub-like vessel is used, fitted with dashers, which are rotated horizontally by a compressed air engine. The vessel is lined with lead and has an extra lining of a continuous coil of lead pipe, through which a stream of ice water passes. In the centre is a large thermometer, on which the workman keeps his eye while the charge is being run. As the temperature rises he diminishes the flow of glycerin; as it lowers, he permits the flow to increase. Practice

makes him expert and enables him to run a charge in about an hour. This man's position is a trying and responsible one. He stands there with his hand on the lever and his eyes fixed on the thermometer, and not for a second dare he relax his attention during the process. The charge consists of five thousand five hundred pounds of mixed concentrated nitric and sulphuric acids, in the proportion of one hundred and seventy pounds of sulphuric to one hundred pounds of nitric, and fourteen per cent., or seven hundred and seventy pounds of glycerin. The mixed acid is run into the tub first, and the glycerin gradually added. After being thoroughly agitated together, the charge is drawn off into a settling vat, where the mixture separates by gravity into nitro-glycerin and sulphuric acid. The nitro-glycerin is drawn off and thoroughly washed with water and the superfluous acid neutralized by an alkaline solution. The sulphuric acid is run through pipes to another building, where all the residual nitro-glycerin is extracted by a freezing process. The remaining sulphuric acid is reconcentrated and used over again.

The nitro-glycerin is stored in tanks, from which it is weighed and distributed in lead-lined copper buckets to the various sub-departments. It is largely used, mixed with other materials, in the manufacture of dynamite under various names and of different degrees of strength, according to the quantity of nitro-glycerine used. For one kind, sawdust, nitrate of soda and nitro-glycerine are used; for another, nitrate of soda, nitrate of ammonia and nitro-glycerin; for another, wood pulp, nitrate of soda and nitro-glycerin. Seven hundred pounds are mixed at a time, the proportion of nitro-glycerin varying from twenty to eighty per cent. according to grade.

Explosive gelatin is made by mixing eight pounds of gun cotton, ten pounds of oxide of zinc and eighty-two pounds of nitro-glycerin, the material being boiled together at a temperature of 140° F. The resulting product is fully as explosive as nitro-glycerin, and safer and more convenient to handle.

Judson powder resembles ordinary black powder in appearance. It is made by heating together a mixture of bituminous coal, sulphur and nitrate of soda, and adding a proportion of nitro-glycerin. It is used for exploding in cracks and crevices and for railroad work.

All the various processes in the business require the most rigid and exact personal attention on the part of superintendents, foremen and workmen, and it is mostly hand labor, the amount of machin-

ery in use being comparatively small. The superintendents, the foremen, the men who run the churn and work in the other processes of making the nitro-glycerin, those who mix the dynamite, those who fill the cartridges, the man who weighs out, the men who boil the material to make explosive gelatin—all, in fact, engaged in these and other processes, never relax the most intense vigilance. As a consequence, accidents are rare; when they do occur there is small opportunity for discovering the cause and but little use for surgical assistance, except to those injured by falling material. The doctor has a gruesome task in assorting and identifying fragments of mortal remains, which, however, is not so difficult as you might imagine.

The different processes are carried on in a number of detached buildings surrounded by earthen embankments, and about one hundred and fifty men are employed. In other businesses where so many men are at work, there is always a certain amount of noise—an occasional whistle or laugh is heard, or one calling to another; but here, one noticeable fact is the absolute silence that prevails. No laughter, whistling or sound of the voice is heard, nor sound of hammer or any tool; the machinery seems to work silently, and even the men who drive the mules hauling the trucks do so without resorting to the usual mule stimulus. The impression is that every one is in a condition of listening, and occasionally most of them hear what they have been listening for—some do not.

This crude and imperfect description will serve to give you some idea of how the men are brought in contact with the material and become affected by it. In the early years of the works, men were changed frequently, but of later years there has been little change in the personnel of the employees.

The first condition to which my attention was called was what soon came to be known as "the powder headache." All suffered from it who were in any way brought in contact with nitro-glycerin or its compounds, and the workmen, of course, suffered the most. This headache is generally severe, and has to be experienced in order to be appreciated. The workmen's wives and others who did the laundry work suffered severely every wash-day. Not only the underclothing worn at work, but any clothing worn by the men, and the bed clothing will cause the headache in those laundering them. In time the men's wives become inured, but all complain of the effects of the ironing. Inhaling the steam from the hot clothes makes them very sick.

Rubbing a little dynamite on the back of the hand, using a towel that a workman has wiped his hands or face on, lying on a lounge in one of their houses, remaining too long in a sleeping-room, auscultating their chests (as Dr. Burk and I can testify from experience), will all cause the headache in one not accustomed to contact with the substance.

Nitro-glycerin, when taken into the system by absorption or inhalation, acts on the vasomotor centres, causing dilatation of the left side of the heart and of the entire arterial system. There is often a distinct reddening of the skin of the face and extremities, sometimes of a pinkish hue, which occasionally increases to lividity and blueness of the finger-nails, lips, ears and nose, with conjunctival injection. Along with this there is palpitation, even thumping of the heart, pulse slightly quickened, soft and compressible, and an intense throbbing pain in the head, worse in the occipital region, and extending down the back of the neck. At every pulsation of the heart the blood can be felt surging through the brain, and in aggravated cases the movement of the blood can be felt in other parts of the body. The one affected walks lightly on his toes; touching the heels to the ground sends an additional darting pain to the head. Nausea and vomiting are often present and sometimes diarrhœa. Weakness and prostration are always present and languor continuing over the next day. Some are more susceptible than others, but all are affected to a less or greater degree. I can speak from a varied personal experience, my worst attack being caused by taking a nap on a lounge with my head on a pillow kindly brought from up-stairs by the nurse, on one of the occasions when I had to remain all night in attendance. Occasionally the headache is absent, but nausea and vomiting or diarrhœa present. One man had an eruption over his body resembling that caused by poison ivy. After three or four attacks he was obliged to give up the work permanently.

In about a week's time the new men become accustomed to the poison and do not suffer from the headache; but nitro-glycerin is rapidly eliminated and the immunity is not permanent, for after two or three days' absence from work they have another, generally lighter, attack on exposure, and many of them have "the powder headache" every Monday morning. Of all engaged in the business, those who fill the cartridge shells suffer the most. Thirty of the men are engaged in this work and are known as "powder punchers." The

shells are paper cylinders dipped in paraffine, and they each hold from two ounces to a pound or more of dynamite. They are filled by hand with a funnel and rammer, the dynamite being taken up with a small wooden paddle. Their hands and arms are covered with the material, and each man handles on an average one thousand pounds of dynamite, containing fifty per cent. of nitro-glycerin, per day, making two thousand half-pound cartridges. Of the eighty per cent. cartridges, fourteen hundred per day, or seven hundred pounds, is the average.

After the headache and other acute symptoms disappear another condition is gradually developed, worse in some than in others, but present to a certain degree in all. This condition is dependent on a dilatation of the heart, particularly on the left side, and of the entire arterial system. The pulse is soft, weak and is obliterated by moderate pressure. The first sound of the heart is accentuated, the apex-beat exaggerated. Murmurs resembling anæmic murmurs are heard, but most frequently from aortic regurgitation and occasionally from mitral insufficiency. There is engorgement of the left ventricle; the heart often acts irregularly and palpitates easily. All the symptoms are aggravated; the heart acts tumultuously; the breathing is rapid and unsatisfying on active exertion, and the man easily becomes tired and exhausted.

A peculiarity is that the heart-sounds can be heard all over the chest, on the right side as well as on the left, probably due to the increased amount of blood in the pulmonary arteries. The appetite is poor, especially for breakfast, and a new man at the business loses weight rapidly, often from ten to thirty pounds. The bowels are sometimes constipated. The kidneys do not seem to be affected; there are no dropsical effusions, and swelling of the feet and ankles is rare. I have made a number of examinations of the urine and found no traces of sugar or albumen, no marked acidity and no especial change in specific gravity. There is a certain degree of mental dullness, particularly noticeable during working hours. The foreman tells me that the powder punchers especially are dull and drowsy while at work. This physical condition is the rule among the workmen to a greater or less degree, according to amount of exposure, previous condition of health and strength, habits of living, idiosyncracy, etc., and to describe it, whether in the acute or chronic form, I use the word "Glonoinism," which is the title of this paper.

The employees are all strong, muscular men, who lead quiet, temperate lives, have the principal meal at the close of the day, use tobacco in moderation or not at all, those who smoke doing so after supper, and do not, as a rule, drink anything stronger than tea or coffee, alcohol in any form producing serious effects. A drink of whisky or brandy will cause an aggravated form of the primary affection—headache, thumping of the heart, reddening of the skin, lividity of lips and face and oppressed breathing. Intoxication is produced easily and is often accompanied by maniacal delirium and subsequent stupor. A single glass of beer will cause headache, palpitation and reddening of the skin.

Cases have been known, however, where men have even become addicted to the use of "Gibbstown punch," which is composed of whisky *ad libitum* taken internally and as much nitro-glycerin as can be absorbed externally, the two mixed in the system. This compound is guaranteed to produce a more violent and serious form of intoxication than any other combination known to man.

Handling this large amount of nitro-glycerin daily with their bare hands and inhaling the fumes, the men's systems become strongly impregnated; and their wives, occupying the same sleeping apartment and doing the laundry work, become affected with glonoinism in a milder degree. There are the same physical signs on auscultation, but not so pronounced. Valvular murmurs are rarer. Dilatation of the left side of the heart is often present; the pulse is soft and weak; the heart palpitates and the breathing is oppressed on exertion; attacks of palpitation without assignable cause are common and, in addition, there is often developed a mild form of ophthalmic goitre. Thyroid enlargement with heart palpitation is frequently seen, the prominence of the eyeballs rarely, but nearly all complain of impaired vision. The uterine functions are often deranged and there is a tendency to undue hemorrhage at the catameniæ and after confinement. Miscarriages and premature births are more frequent and they have fewer children in a family than other classes of the community.

Children born under these circumstances are not as strong and vigorous as others of the neighborhood, who, I think, are exceptionally healthy, unbroken families being in the majority. Cyanosis at birth is common, and they do not have the stamina to resist disease. Diphtheria, not very fatal with us, as a rule, has had several victims in these families. The complaints of teething and hot weather, whoop-

ing-cough and catarrhal fevers in the winter are more than usually severe, and from these and other diseases there are more than the average number of fatal cases.

The children sometimes become affected with glonoinism. I have frequently been called upon to treat palpitation of the heart, shortness of breath, headache and disordered vision in children caused by sleeping in the same room with their parents. It is not safe for one of these men to carry his infant in his arms for any length of time: if he does, he is sure to have a sick baby. Infants must not sleep in the same bed with their parents; the result may be more than dangerous. Soon after the works were established I was called at three a. m. to see a child aged four months. The mother being ill and the baby fretful, the father had carried the child to quiet it, and had then taken it to bed with him and held it in his arms, in which position they both fell asleep. After two hours he awoke and found the child seriously ill. I found the baby in a state of collapse, pulseless, skin cold and livid, head thrown back and moving from side to side, child moaning with each motion of the head, eyes partially closed and pupils showing between the lids, as though the eyeballs had fallen forward. Not recognizing the condition, I do not think my treatment did any good, and may have done harm. The father continued to hold the baby to his breast till its death, which occurred in about two hours. The peculiar condition with the eyelids partially closed and the pupils showing through the lashes I have learned to recognize as diagnostic of this condition in children, having seen it in other cases. From subsequent experience I am convinced that the child—not a strong one—was killed by contact with its father's body and clothing and by inhaling his breath. A few weeks ago I had a new-born child nearly killed by the nurse carrying it to another room and placing it in its father's bed.

The workmen, as a rule, with the exceptions above stated, enjoy a reasonable share of physical health. They are no more liable to the common run of diseases than others, and are not protected from any except in consequence of their quiet, regular and sober habits of living. Living a little nearer the brink of eternity than others is also calculated to make men walk circumspectly, and I do not think they ever quite forget. Many have told me that the danger of sudden death was an ever-present idea with them.

As you may readily imagine, a condition such as I describe under

the term "Glonoinism," has a marked effect upon pathology and therapeutics wherever it exists. Some forms of disease are more severe where it is present, and in all the treatment has to be modified. For instance, rheumatism requires good nursing, alkalies, opium, salicylate of cinchondia, and the avoidance of colchicum and depressants. In typhoid and low forms of fever, alcohol cannot be used early. In pneumonia and congestive conditions all heart depressants must be avoided; moderate bleeding, when indicated, acts beneficially. The epidemic of grippe affected these cases of glonoinism severely. There was more than the usual amount of headache, with cardiac and nervous depression, lividity of skin, blueness of lips, ears, nose, etc., in addition to the general aching. The condition at first resembled an aggravated form of powder headache, with muscular pain and fever. The coal-tar derivatives could not be used at all, nor alcohol in the early stages. After three or four days, milk punch could be used sparingly. Opium, quinine and strychnine were the main dependents, with milk punch later on. Convalescence was slow. A condition of congestion of the lungs, with plum-juice expectoration, was common. I find no record of any case of phthisis occurring among the men, but three of their wives have died with it. Two fatal cases of pneumonia were reported, both dying suddenly. The deaths from other causes, except those killed by explosion, have not been above the average, and there have been no cases of sudden death simply from heart affection.

Therapeutically, antipyrin, acetanilide, and like medicines have a bad effect, and cannot be used. Calomel and massa hydrargyri are more liable to cause salivation and irritate the stomach and bowels. (We are dealing with nitric acid now.) The decided forms of mercury bichloride and the iodides can be used with safety in the proper dose. The bromides have no effect on the headache, and irritate the stomach. Iodide of potassium cannot be used for the same reason; where it is indicated, iodoform may be given in capsules, and acts well on the general condition. The various preparations of opium can be used, and are of general benefit. Any of the non-depressant vegetable medicines can be used, provided the preparation does not contain alcohol in appreciable quantity. After a few days' sickness, as the poison is rapidly eliminated, whiskey or milk-punch may be used carefully if indicated. Spirit of nitrous ether is as bad as alcohol. Sulphuric ether is about the worst of all in its effects, and if I

had to use an anæsthetic on any of these men, I would prefer chloroform, which has acted well in obstetrical practice.

In the treatment of "powder headache" the inhalation of a few drops of chloroform will give prompt relief, but has to be repeated at intervals of fifteen minutes to half an hour, until the attack is over. Inhaling the vapor of iodoform will also give relief, but not as effectively as chloroform. Rest and quietness and plenty of fresh air are requisites.

The treatment of the chronic condition of glonoinism is palliative, so long as the exposure continues. Strychnine, in doses of one-thirtieth of a grain four times a day, does more good than anything else. I have seen benefit from the use of iodoform, one to two grains three times a day, but have seen none from digitalis or strophanthus. Good diet, cleanly habits, taking a warm bath and changing the clothing on returning from work, with moderate exercise in the open air (and riding the bicycle moderately to and from work) are all beneficial, and are rules generally observed by the men. Total abstinence from alcohol in any form is an absolute necessity. Tea and coffee used moderately seem to be beneficial. Tobacco is injurious. A few weeks' or even days' absence from work causes an improvement in the general health, and those who leave permanently seem to entirely recover. Nitro-glycerin is used medicinally in regular practice in doses of a drop of a one-per-cent. solution. From what has been said you will infer that in order to have any results from its continued use the dose should be rapidly increased. If the giving is suspended for a few days, the minimum dose should be given on resuming its use. With regard to the ultimate dose, how much these men are taking into their systems who are handling one thousand pounds of a fifty-per-cent. mixture a day with their bare hands, besides breathing an atmosphere in which a fly soon dies, we can only imagine.

There is another observation, pertaining rather to the destructive than to the healing art, which I cannot refrain from mentioning, and which bears directly on our experiences in the recent war.

Smokeless powder is made from nitro-glycerin or explosive gelatin mixed with other materials, especially camphor, which has the effect of making it burn more slowly. Some brands of smokeless powder contain as high as fifty-five per cent. of nitro-glycerin. Nitro-glycerin when detonated causes the same symptoms of headache,

nausea, etc., that are produced by working in it. This is the principal objection to using dynamite in mines and confined spaces. Sportsmen who use smokeless powder often suffer from the headache, and I am of the opinion that one of the troubles the Spaniards had to contend with in the late campaign was that their troops were disabled by their own powder. I am informed by competent authority that the powder used in the Mauser rifles contained a high proportion of nitro-glycerin. It was reported that General Toral told General Wheeler that "he had a trouble in his army that he could not speak about, and was obliged to surrender." I strongly suspect that this was his trouble. Early in the war I communicated some of the facts you have heard to-day to the Secretary of War, together with my conviction that if the Spaniards should at any time indulge in any sustained infantry firing, such as in the old days of Chickamauga, Stone River, and like battles, their men would not even be in the condition to run away. You will remember that one general engagement each at Santiago and Manila was followed by a hoisting of white flags. Considerable fault was found with our government for using the ordinary black powder. This had its disadvantage in showing the enemy where to shoot; but with a nitro-glycerin powder, in a short time after an engagement had begun the majority of those doing the shooting would be very sick men. After two or three days' fighting they might become seasoned; but the immunity would soon wear off and the same would happen in every other engagement. In the navy, with the vessels in motion and the guns discharging outside the turrets, and the partially burned powder falling into the sea, the effect on the crew would be minimized.

This subject needs further investigation. No decomposition of a compound can be more radical than that produced by the combustion of nitro-glycerin, and the new gases so quickly formed must be as different as possible in their molecular combination from the liquid or solid producing them. I can only believe that this combustion is never complete, and that a certain percentage of nitro-glycerin is diffused undecomposed in the atmosphere. It is certain that if the bulk of smokeless powder grains is not rightly proportioned to the calibre and length of bore of the guns, some of them are found at a short distance from the muzzle only partly consumed and quietly burning in the atmosphere at its lower temperature.

In order to bring this subject of glonoinism properly before you, I

have made as careful physical examination of most of these men as I was competent to do. Thinking that the testimony of two witnesses would be useful, I requested the assistance of our fellow-member, Dr. Charles M. Burk. The examinations by stethoscope and sphygmograph were made at the mens' homes, as a rule, after the days' work was over, between eight and ten P.M. Examination at the works might have been open to the objection that the men were then under the direct influence of nitro-glyçerin. The sphygmographic tracing were often difficult to obtain, on account of the feeble condition of pulse; in some we failed entirely. Some of the tracings were so remarkable that from time to time we tested the instrument, a very delicate one, on a healthy pulse to see if it was working true, and took every precaution to have the records correct. Some were taken, from the same person, at intervals of two days. I have the notes of the records of examinations appended to this paper.

In nearly every case examined by the stethoscope there was found an accentuated first sound, an exaggerated apex-beat, and left-sided dilatation.

In a number of the cases there was aortic regurgitation; mitral insufficiency was more rarely found.

The report on each individual case is appended.

The case nearest to a normal condition is No. 6, the foreman of the dynamite mixing-house.

In nearly all the cases the heart-sounds could be heard all over the chest, on the right side about as well as on the left. Care was taken to make the examinations after a period of rest, as the condition is aggravated by exertion.

In at least four-fifths of the cases examined by the sphygmograph there has been a short systole and a soft pulse, showing diminished arterial blood-pressure. In a few cases a short primary wave has been detected, but in the majority of cases it is absent. The double beat could be detected in three cases at the carotid and in two at the radial. The sphygmograms show a decided condition of decrotism in ten cases out of the thirty thus far examined, and the majority show a semidicrotic sphygmogram. I should therefore say that in these cases of glonoinism we have a decidedly diminished tention within the arterial system, and consequently a soft and dicrotic pulse.

The following is the clinical history of a few cases believed to be typical. In these cases both the history and sphygmogram show a

marked similarity and illustrate the conditions seen in twenty cases of the twenty-four examined.

CASE 5.—Mr. M. S., aged twenty-six years, has worked four years in the material. He speaks of his health as being fairly good, but complains of palpitation of the heart and shortness of breath at the least exertion. Occasionally he has headache on Monday. He is a total abstainer from alcohol. Auscultation gives first sound accentuated, apex-beat pronounced, and percussion showed apparent left-sided dilatation. The sphygmograph gives the following writing:

No. 5

CASE 11.—Mr. C. M., aged twenty-four years, has worked as a powder puncher for three years. During the first year he suffered severely with headache, but at present complains of this only on Monday mornings. He is continually short of breath, and tires easily. This patient states that a month ago he was away from work three days; on the third day he washed his overalls, and was prostrated with a severe attack of vomiting. Auscultation shows first sound accentuated, apex-beat exaggerated; percussion showed left side of heart dilated. Sounds heard plainly all over the chest. The pulse yields the following sphygmogram.

No. 11

CASE 12.—Mr. C. W., aged thirty-two years, has followed the occupation of powder puncher for six years. He is a total abstainer from alcohol, rides a bicycle to work, and finds that, though he rides slowly, he becomes very short of breath. Otherwise he speaks of his health as being fairly good. Auscultation and palpitation shows the apex-beat to be exaggerated and the first sound accentuated. Heart-sounds heard at any portion of the chest. Percussion showed left-sided dilatation. The sphygmograph gives the following writing:

No. 12

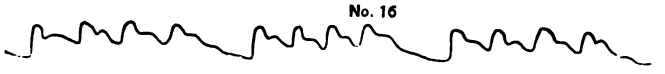
CASE 13.—Mrs. C. M., aged forty years, wife of a cartridge-filler who has worked in that capacity for sixteen years. She sleeps with her husband and washes his clothes; formerly every Monday she suf-

fered from severe headache, but at present on wash-days has fainting spells and complains of being sick the entire day. On exertion she becomes very short of breath; has palpitation of the heart; eye-balls prominent and eyesight poor; thyroid enlarged. Percussion shows dilatation of left side of heart. The pulse gives the following writing:

No. 13

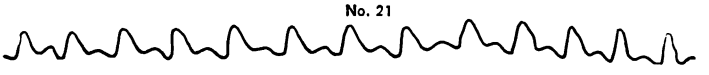
CASE 16.—Mr. A. P., aged forty-seven years, has been employed in the factory sixteen years, his occupation being to boil nitro-glycerin and gun-cotton at 140° F., producing by this process what is known as gelatin. He has never had rheumatism, and states that his health was always good previous to working in powder. He gives the usual history of shortness of breath, weakness on exertion, with palpitation of the heart and præcordial pain. Percussion and auscultation show left-sided dilatation of the heart and the murmur of mitral regurgitation. The sphygmograph gave the following writing:

No. 16



CASE 21.—Mr. C. Munyan, aged thirty-nine years, has worked as powder-puncher eleven years. He had lost weight in the past year. His appetite is poor and he feels weak; finds that he cannot hurry without becoming short of breath and causing palpitation of the heart. Auscultation and palpitation show first sound of heart to be accentuated; apex-beat pronounced. Percussion gives left side of heart dilated. The sphygmograph gave the following result, which shows, as did the preceding cases, a condition of dicrotism:

No. 21



The conclusions which I have reached from these observations may be summed up as follows:

1. Nitro-glycerin acts on the vasomotor centres, causing dilatation of the left side of the heart and of the arterial system.

2. The primary effect is to produce intense headache, oppressed breathing, palpitation of the heart, etc.

3. By continued exposure the chronic condition of glonoinism is developed, characterized by dilatation of the left side of the heart and

of the arterial system. As a result of this dilatation there may be insufficiency of the semilunar valves and aortic regurgitation, and also mitral insufficiency.

4. This condition is accompanied by irregular action and palpitation of the heart and oppressed breathing on exertion.

5. In females there is produced a mild form of exophthalmic goitre, with a tendency to hemorrhage.

6. The poison is rapidly eliminated, and the subject is only immune from the headache so long as the contact is continuous.

7. An enormous quantity can be absorbed without serious consequences if increased gradually.

8. The vapor resulting from detonation will cause the same effect as the substance itself.

9. The chronic condition of glonoinism, which is one of decided heart affection, is not inconsistent with a fair amount of health.

I am under obligation to our fellow-member, Dr. Charles M. Burk, of the University of Pennsylvania, for assistance in making the physical examination by stethoscope and sphygmograph of many of these cases, and for preparing the photographs of the tracings.

I have carefully refrained from any discussion here of the collateral subjects which are so readily suggested in connection with nitro-glycerin; its therapeutic use especially in angina pectoris and epilepsy and tetanus; its use as an antidote to chloroform; its administration by the external application of an alcoholic solution in preference to internal use; the antidotal action af iodoform; the exact mode of its elimination; the mechanical effect of dilatation in causing valvular deficiency; affection of the vasomotor centres as a cause of heart disease, etc. These are apart from the special condition which makes glonoinism a definite pathological state, and I can only suggest them as fruitful topics for further and more competent investigation than can be made with the limited time and facilities of the country practitioner. I have much pleasure in handing to you for inspection the sphygmographic tracings, which will illustrate a number of cases under observation, and now thank you for the kind attention which you have given to an address unavoidably prolonged, but very sincerely offered as an humble contribution to the exhaustless art in which we are privileged to serve.

HISTORICAL ADDRESS.

BY LUTHER M. HALSEY, M.D.

Historical addresses are apt to be dry and prosy unless the narrative is told by some master. Men of Motley's and Prescott's type, with their beautiful command of language, their power to fascinate with their stories, the ability to hold one spellbound until its conclusion, are rare. It has fallen to me to be your historian today. I shall endeavor to confine myself to the society's organization, important facts in its history and some hopes and suggestions for its future.

Eighty years have passed (more than the time allotted to man by the Psalmist) since a meeting of physicians took place in our county, which gathering we are here assembled today to celebrate. Our forefathers in medicine laid the corner-stone of this edifice which, notwithstanding its troubles, the temporary cessation of its meetings, has each time, like the phœnix, arisen from the ashes imbued with life, stronger, more invigorated than before,

The Medical Society of New Jersey was organized July 23, 1766, at New Brunswick, but was not incorporated until June 2, 1790. Among the charter members we find the name of Dr. James Stratton, of Swedesboro. He was self-educated, barring one term at the University of Pennsylvania. At the breaking out of the Revolutionary War, he gave his services to his country. His practice extended from Woodbury to Salem and twenty miles in the interior. He was eminently successful, popular and had great influence in civil and political affairs, and was Judge of the Court. His son, Hon. Charles C. Stratton, was Governor of the State. Not until 1816 were district or county societies established, and the physicians of this county, though few in number, were so progressive that in two years they took the first step toward organizing this district society. At this time and until 1844, Camden County was a part of old Gloucester.

No medical society is known to have existed in this county prior to 1818. On the second of September of that year a meeting of a number of the physicians of Gloucester County was held at Woodbury. An application was made to the State Society for authority to organize a district society. On the second Tuesday in December, 1818, at the house of Jesse Smith, in Woodbury, the District Medical Society of the County of Gloucester was organized, when the following persons were elected: Dr. Dayton Lummis, President; Dr. Bow-

man Hendry, Vice-President and Corresponding Secretary; Dr. Jeremiah J. Foster, Recording Secretary and Treasurer. The following is a copy of the letter relative to the meeting:

"PRINCETON, N. J., November 12, 1818.

"*Sir*:—A copy of the proceedings of a convention of a number of the physicians of Gloucester County, N. J., held in Woodbury on the 2d of Sept., 1818, was forwarded me by Dr. J. J. Foster, their secretary, and was duly received. Agreeably to the request therein contained, application was made to the State Society at their meeting on the 10th, to authorize the physicians of Gloucester County to organize a district society in that county. I have now the honor to transmit to you a short transcript of their proceedings on that subject, which will be your authority for organizing a district society in your county on the second Tuesday of December next. The secretary, who was necessarily absent at the meeting of the Society, will be requested to furnish you with a copy of the laws of the Society with as little delay as possible.

"I have the honor to be, with great respect, your obedient servant,

"DR. DAYTON LUMMIS." "JOHN VAN CLIVE."

Copy of the resolutions endorsed in foregoing letter:

"Upon application from the following named gentlemen of the County of Gloucester for the purpose of organizing a district society for the County of Gloucester, viz.: Dayton L. Lummis, Bowman Hendry, Joseph Fithian, Lorenzo Fisler, Isaac Davis, Benjamin Ervin, Francis Hoover, William Hunt, Samuel Harris, Thomas Hendry, Jeremiah J. Foster, Ezra Baker and John C. Warner, it was resolved that the above-named gentlemen be authorized to meet at Woodbury on the second Tuesday in December next for the above-named purpose.

"Signed FITZ RANDOLPH SMITH,

"NEW BRUNSWICK, Nov. 10, 1818." "Secretary, pro tem."

The society held its annual and semi-annual meetings regularly up to December, 1821, when they were discontinued. It was reorganized March 16, 1830, at which meeting Dr. Charles Garrison was elected to membership. Delegates to the State Society were chosen and the semi-annual meeting of society ordered for the following June. Prior to 1836 the District Society of Gloucester County was holding sessions and transacting business under a resolution passed by the State Society. In that year a charter was granted to Drs. C. F. Clark,

I. S. Mulford, Thomas Lee, Joseph Fithian, Samuel Harris, Bowman Hendry and J. P. Thornton. On the second Tuesday in May, 1836, working under this charter, an organization was entered into as follows: President, Dr. Joseph Fithian: Secretary, Dr. I. S. Mulford; Treasurer, Dr. Charles Garrison. Meetings were held alternately in Woodbury and Camden. In 1846, the charter having been lost, Drs. Jos. Fithian, C. F. Clark, Joseph C. Weatherbee, Thomas J. Saunders, John R. Sickler and B. F. Howell, after some correspondence with Dr. Mulford, of Camden, applied for a new charter, which was granted them on the twelfth of May. Following is a copy.

"APPLICATION.

"We, the undersigned, licensed physicians and resident practitioners of the County of Gloucester, respectfully request the Medical Society of New Jersey to confer upon the members of the medical profession of said county the power to organize a district medical society for the County of Gloucester.

"April 30, 1846. "JOSEPH FITHIAN, C. F. CLARK,
"JOS. C. WEATHERBEE, THOS. J. SAUNDERS,
"JOHN R. SICKLER, B. P. HOWELL."

"STATE OF NEW JERSEY.

"By the Medical Society of New Jersey to Joseph Fithian, C. F. Clark, Joseph C. Weatherbee, Thomas J. Saunders, John R. Sickler and Benjamin P. Howell, physicians and surgeons:

"*Greeting*—Your application requesting that a district medical society might be instituted, consisting of Joseph Fithian, C. F. Clark. Joseph C. Weatherbee, Thomas J. Saunders, John R. Sickler and Benjamin P. Howell, in the County of Gloucester, was duly considered at a meeting of the Medical Society of New Jersey, held at New Brunswick on the twelfth day of May, 1846, and it was thereupon voted that your request be granted. Be it therefore known, that pursuant to an Act of the Legislature of this State, the Medical Society of New Jersey doth appoint Jos. Fithian, C. F. Clark, Jos. C. Weatherbee, Thomas J. Saunders, John R. Sickler and Benjamin P. Howell, physicians and surgeons, practitioners and residents of the County of Gloucester, to meet at the county town on the sixteenth of June, at ten o'clock in the forenoon, then and there to form themselves into a society to be called 'The District Medical Society of the County of Gloucester,' in the State of New Jersey, for the purpose of

electing officers, making by-laws, rules and regulations, having and using a common seal and transacting such other business as they shall deem expedient. In testimony whereof, the President, pursuant to the aforesaid vote of the society, has hereunto subscribed his name and affixed the seal of the corporation, at New Brunswick, this twelfth day of May, 1846.

"ROBERT S. SMITH, *President.*

[SEAL.] "WM. PIERSON, *Rec. Secretary.*"

In 1846, six physicians met in Haddonfield for the purpose of organizing the Camden District Medical Society. Of this number three were members of the Gloucester society: Drs. Mulford, Hendry and Thornton, who, according to the historian of Camden county, were the pioneers in county medical organization and the champions of medical progress. He further says this organization (Camden County Society) sparkles with all the brilliancy of modern medical science and surgical art. It has watched over and preserved public health, advanced the methods of medical practice, elevated the standard of medical education; it has strengthened the reputation of the county in knowledge, character and public good. What good seeds our founders planted; probably little did they think that from their blood should develop an organization which has wielded such a powerful influence for good. Verily, I say unto you, much good cometh out of Gloucester.

It is, therefore, evident that the Camden society, composed of men of ability in their chosen profession, in legislation, in military matters, in politics, literature and education, are our children, our offspring. While we are proud of their achievements, they should always remember with pride their origin, giving due credit to the noble band of men who assembled to organize the District Medical Society of old Gloucester. It is the pathfinders in medicine, as in other vocations, whose memory should be revered and honored. It is to our founders that all credit should be given for their work in moulding and binding together the profession in West and South Jersey.

As early as 1817 the State Medical Society appointed censors for the district societies. In the spring of 1819 the State Society appointed as censors for West Jersey, Drs. Lummis, Hendry, Foster, Fithian and Harris, and forwarded to them the following instructions with the power to examine and license physicians:

"*Resolved*, That the censors appointed by this Society be instructed

not to give a certificate to any candidate who may apply to either of the district societies now or that may hereafter be organized, until he can give satisfactory evidence of having attained the age of twenty-one years, studied under the direction of some regular practitioner of medicine the term of four years, and attended at least one course of lectures. But if he shall have obtained a diploma from any college, then three years' study, including a course of lectures, shall be deemed sufficient.

"*Resolved*, That it shall be the duty of the censors of the several district societies of this State, carefully and impartially to examine every applicant for license to practice physic or surgery within this State, on the subjects of materia medica, pharmacy, chemistry, anatomy, physiology, surgery, theory and practice of physic and midwifery."

The Medical Society of New Jersey, in their construction of the late supplement to the Act of Incorporation, conceive the censors of the several district societies subject to their control and direction, and consequently amenable to them for any omission or irregular performance of duties connected with that appointment. Under this impression they have communicated several resolutions on the subject of examination as rules of conduct for the government of their censors when called upon by candidates, which they expect will be adopted and rigidly practiced without respect to persons or circumstances. That every shadow of doubt may be removed and the censors fully understand such was the design and intention, a resolution was unanimously entered into by the State Society at their fall session of 1818:

"That the letter and spirit of the resolutions adopted at the preceding meeting are in no case whatever to be suspended by the censors of the several district societies, the Medical Society of New Jersey therefore with confidence anticipate a strict adherence to the rules prescribed, and that the censors of the several district societies will enter on their responsible and important duty with zeal, industry and patient perseverance, determined to conduct in such a manner as to reflect honor upon themselves and the institution from whence their authority emanates; that a proper degree of liberality, divested of every appearance of partiality, will be exercised towards the candidates, and a strict, dignified and conscientious deportment will characterize on all occasions every examination. By such means the science of medicine will become respectable, the profession honorable and the best interests of the Society promoted."

The American Medical Association, which has been and is such a power for the advancement of medicine and the binding together of the profession, had two Gloucester County men—Drs. B. F. Howell and Joseph F. Garrison—present at its birth, and who were active in its organization in 1847, since which time the Gloucester County Medical Society has been represented almost continuously at its meetings. This, in conjunction with a charter member of the State Society, clearly demonstrates that we have ever been at the front in every progressive movement in medicine.

At the annual meeting in 1850, delegates to the State Society were instructed to bring before that body the importance of a high standard of preliminary education among those entering the profession, thus taking a step far in advance of almost all medical colleges, and which has since been adopted. Time will scarce permit me to follow the minutes as closely as would be interesting. The outbreaks of epidemics, interesting cases of some of which I shall make special mention. The society's meetings were very well attended, the sessions for years held quarterly, almost always at the houses of members, either in succession or repeatedly at some member's who was overzealous in entertaining. These meetings were always a source of much enjoyment, making a break in the life of arduous work and showing that the society at all times kept abreast with the latest medical thought.

During the war there was a slight intermission, largely owing to absence of several members who were serving their country in distant fields. After the Rebellion the work was taken up with renewed interest. During this period a number of Salem County physicians became members of our society and remained with us a number of years, taking a very active part in its meetings. In the latter part of the seventies and early eighties, a number of young physicians settled in the county, enrolled themselves as members and gave new life to the organization. During the period from April, 1883, to January, 1889, the society was composed of about twenty-five physicians in active practice. Topics for discussion were of a practical character—the epidemics prevalent then, as now, among others; dysentery and scarlet fever—their treatment, mortality, etc., were never failing topics of interest. Reading these reports, one is surprised at the low death-rate mentioned, one member reporting ninety-three scarlet fever cases with but one death. Normal urine injected into the bladder was

reported as a successful remedy for cystitis with ammoniacal decomposition of urine.

The appointment by the State health authorities of a Camden County man as Medical Inspector of Gloucester County was properly resented by the society, proving it was ready then, as now, to guard with zealous care the right of the profession in our county. During this period the society lost many members—Drs. Joseph Fithian, C. F. Clark, Charles Garrison, Jos. C. Weatherbee, Paul Heritage, John R. Sickler, William Turner, A. J. McKelway. The notices in memoriam following each death and spread upon the minutes, give ample proof of faithful lives well and truly spent in ameliorating the suffering of afflicted humanity.

After a cessation of three years the society was reorganized in January, 1893, and from that meeting to the present has been strengthened by old members returning and adding new ones, together with increasing enthusiasm. In April of that year the society was entertained by the President, Dr. L. M. Halsey; and Drs. James Tyson and Charles Turnbull, of Philadelphia, were made honorary members. At the following annual meeting the society was entertained by the Secretary, Dr. George E. Reading. At the meeting in July, 1893, the President announced the death of Dr. Samuel Fisler, of Clayton, who was both the oldest member of the society and practitioner in South Jersey. Appropriate minutes of the loss to the society was entered upon the records.

In 1893, the Constitution was revised, with several changes; among them was an increase in the number of meetings to five yearly. In 1894, a marked step in advance was taken by the society adopting a Constitutional amendment, establishing a Board of Censors. In July of that year, the society was delightfully entertained by Mr. J. J. Kromer, of "The Arlington," Cape May, at his hotel. At the meeting in September, 1895, the society was officially notified of the death of Dr. L. F. Halsey, which occurred July 7. A resolution was adopted showing the sense of great loss sustained by his death. At the meeting of May 28, 1896, the President called attention to the approaching eightieth anniversary. On motion of Dr. H A. Stout, a committee was appointed to finish the history of the society, begun by Dr. L. F. Halsey, and to arrange for a fitting anniversary celebration.

A memorable fact in 1897, was establishing closer relations with

the societies of Salem and Cumberland. Within the last fifty years our society has had the pleasure of listening to many essays, both instructive and entertaining, the work of its members. The names of some representative essays will give you the best idea of the scope and kind of work which our society has done in this line.

In 1848, Dr. Sickler wrote on the "Philosophy of the Human Mind," a very general and abstract subject, as you see, giving leeway for individual treatment. This was followed in 1850 by the more specific subject, "Periodic and Returning Colics," by Dr. J. F. Garrison. In 1850, though Dr. Fithian has a subject couched in as general terms as that of the "Philosophy of the Human Mind," only this time it is the "Philosophy of Man." (?). In 1853, Dr. Sickler again steps to the front with an essay on "Erysipelas." In looking over the minutes to find the title of these essays, I have jotted down any points which it seemed to me would be of interest to you. These I mention in their chronological order, preserving chronology at the risk of sacrificing unity. In 1855, Dr. L. F. Halsey was admitted to the society, at which time he, with three others, Dr. C. F. Clark, J. R. Sickler and S. T. Miller, were elected delegates to the American Medical Association.

"Medicine as a Science," is the abstract title of the paper read by Dr. S. T. Miller, in 1857. Words which Dr. Halsey put into practice at the same time by advocating that scarlet fever was contagious. This position the society questioned, a course which seemed incomprehensible to this generation. Not deterred by the doubting reception afforded his advanced theory about scarlet fever, Dr. Halsey, in 1859, gave it as his opinion, in the course of an essay on scrofula, that that disease was of tubucular origin, a view which was not held by the society. He also reported a case of extra uterine pregnancy of six years' standing. He exhibited a number of fœtal bones he had removed from vagina and rectum.

The next essay worthy of mention is one written in 1862, by Dr. Fithian, or rather the one failing to be written, for our worthy comrade in medicine succumbed to an attack of vertigo. The expectant assembly had to turn their attitude of critical attention into one of sympathetic interest; a motive which doubtless prompted Dr. Sickler to advise brandy on the principle of "similia similibus curantur."

In 1866, Drs. Sickler and Howell reported a number of cases of cholera. At the same time Dr. Garrison, in a report of a number of

cases of puerperal fever, contended that it was infectious and contagious. It was in 1868 that the society, imbued with the spirit of reconstruction, then so popular in our country, adopted a new rate of charges, which each member was requested to sign.

To continue with our essays (which the society seemed to have dropped for a number of years), in 1870, Dr. Garrison spoke on the "Hypodermic Syringe." In 1871, Dr. Turner, on "Thermometers."

The year 1872, marks several important facts in the development of our society. In the first place, Drs. Fithian and C. F. Clark were made honorary members, a practice now first adopted of honoring its aged members. Second, and more important because significant of the spirit of the age, was the resolution passed recognizing women graduates of schools in good repute, as regular practitioners. In the third place the society passed a resolution authorizing the Secretary to deny publicly in the papers that the society had raised its fees. Two years later, in 1874, the Society elected Dr. Charles Garrison an honorary member, the just due of one who had served a long and honorable membership. At this same meeting, Dr. Allen delivered an essay on "Locomotor Atoxy." This was at a time when many of the society advocated the use of anæsthetics in difficult labors.

Centennial year was the time for a little festivity, of course, of a strictly medical nature. The Gloucester and Cumberland County societies entertained the State society at Cape May, the West Jersey railroad liberally extending free passes to all. In this same year, Dr. C. G. Garrison read an essay on "Mercurial Medicine." Dr. Heritage also favored the society with a very interesting paper on "Temperature in Eruptive Fevers." To leap from essays and entertainments to small-pox is the acrobatic feat I am forced to preform now, for in the year 1877 we find the society exercised over the prevalence of this disease in Paulsboro. At the same time Dr. McKelway reports a case of typhus fever. It must have been a relief to turn from these announcements to the interesting temperature charts of Dr. Heritage.

In 1878, Dr. Laws wrote on "Curvature of the Spine." In that year Dr. Halsey reported a very interesting case of "Fractured Skull," in which he trephined successfully. After a long discussion the society decided, in the same year, that phthisis was infectious, but not contagious.

The only thing of importance in the year 1879 was the report of Dr. Laws, of a case of cancer of the breast, which was cured spon-

taneously. The next year, however, Laws delivered an essay on "Homœpathy," which was so well received by the society that they ordered one hundred copies to be printed for distribution. The society also took up the fight against bogus diplomas, in which they were ably assisted by the *Philadelphia Record.* The interesting case of this year was that of tetanus, successfully treated by Dr. Halsey, with large doses of atropia.

The next year the essay was delivered by Dr. Fisler, lauding the effects of carbolic acid in typhoid fever and chronic diarrhœa. He claimed good results. Dr. L. F. Halsey advised the use of boracic acid as a surgical dressing.

In the year 1882, Dr. Heritage amputated at the shoulder-joint for gun-shot wound. This year was the signal for another outbreak of small-pox, only this time Glassboro was the sufferer instead of Paulsboro. Between 1882 and 1893, nothing happened in the society of sufficient importance to warrant mention. In 1893, Dr. Tyson read a very able and instructive paper on "Anæmias." In 1894, the President of the Society, Dr. Laws, read a paper written with his usual ability, on "Blood Letting," representing it as the remedy par excellence for pneumonia and apoplexy.

The next work of importance is that of Dr. George E. Reading, who, in 1896, gave a history of a case of interstitial nephritis which he had treated by giving enormous doses of nitro-glycerine to the benefit of his patient. This method of treatment startled an able authority on therapeutics, who had thought the human system incapable of standing such doses.

In following me through this labyrinth of dates, names and titles, you have doubtless noticed the changes in the character of the work done. In the forties, we had essays on subjects like "Philosophy of Man," or scarlet fever in general; in these later years we listen to discourses on thermometers and special phases of some disease, or the use of certain medicines in diseases. That is, the tendency has been to come from the general to the particular; from the broad to the special subject. The second tendency is the scientific way in which, more and more as the years advance, we take up and talk of the study of medicine.

Of the Presidents and personal biography of the members, the Committee hope to make a full history, to be published in the near future. Positions of trust and honor have been well and ably filled

by members of this society. Dr. James Fithian and Dr. John R. Sickler have been Presidents of the State society. Dr. C. G. Garrison occupies a high position on the bench; his father, J. G. Garrison, received the highest honors of the church. Drs. Sickler and Miller were a credit to the courts of this County, as Judges. Drs. H. C. Clark, S. T. Miller, L. F. Halsey, J. D. Heritage, A. J. McKelway, George C Laws, served their County well as surgeons during the rebellion. The County has been ably represented in the legislature by Drs. John R. Sickler, Wm. Iszard, Thomas Reeves, Joseph Rowe. The cause of education has been ably espoused by Drs. Law, Reading, Miller, Hunter, Oliphant, Stout and Halsey, and in fact, by most of the members of the society, many occupying positions on their respective boards of education for years.

At the graves of our deceased members let us pause in loving memory. They were men whom we all felt better for meeting. We enjoyed the ripe experience of their minds, we felt the subtle comfort of the hand ever ready to help us, we looked up to their conception of professional honor. Let us always hold their memory in reverence, and let the many lessons they have taught us be our guiding star of the future. They labored honestly and conscientiously for the health and welfare of the community, doing a grand and noble work, frequently knowing they would get no remuneration, but bestowing their charity just the same, laboring as carefully for the poor as for the rich. It has often seemed to me that physicians, particularly country doctors, are not appreciated. Who comes closer into your life than your physician? Who brings you into this world, watches over your health, guards your secrets and at times closes the eyes of your loved ones in death? Yet how often in the fullness of health he is forgotten. Health, time and strength are sacrificed following out our Lord's commands, "Greater love hath no man than this, that a man lay down his life for his friend."

Some thoughts present themselves to my mind for the future. In looking over the minutes I find no accurate data on epidemics, no complete written history of interesting cases, a very scant record of the treatment which has been pursued either in epidemics or particular cases. What should be done in the future is that every member should file with the secretary a complete history of epidemics and the treatment which has been the most beneficial. These should be carefully filed, and I hope to live to see the time when the society will have a home of its own. Then we will have the proper place to file our

archives. Each of us collect, during the years, many journals and reprints; these would form an excellent nucleus for a library. If the society would exert itself in the future as in the past two years we would very soon have a fund sufficient to erect a building, ample for our needs. Then our historian in the years to come would have some pleasant things to say of the members of the society of 1898. Our society has been strictly a working, practical organization. The diagnosis and treatment of one member is carefully criticised by the others, their weak points shown and suggestions made for improvements. Practical subjects and papers coming into our daily life are discussed. Let us continue these and have lectures on bacteriology and blood examination, and the great study of the action of chemic poisons upon the human economy.

While it is clear to everyone that environment both shapes and makes the progress of individuals in all communities, its influence over medical men and their work is not recognized. I believe that the meetings of the society are an educational factor in the personality of the men who attend. The narrow characteristics expand and disappear. One often finds that his own exalted abilities are feeble compared with others, and he becomes more able to judge his own opinions favorably, and his weak points are developed with startling rapidity. We are all subjects to environment, but to make it help and not detract is the province of wisdom. The intense personalities, weaknesses and defects require therapeutic study and treatment, and one of the great specific remedies is to cultivate a larger acquaintance with the profession.

We, as physicians and as a medical society, have been negligent of our individual and collective responsibilities as citizens in matters affecting the public welfare. The interest of a physician in good government is something more than a citizen. He is himself guardian of the public in their nearest and dearest relations, and as such it is his duty to do all in his power to protect his charge from all evil legislation or the vicious maladministration of salutary laws. In the matter of direct sanitation, the value of medical knowledge alone ought to be sufficient evidence to require no demonstration. If we, as physicians, were more cognizant of our political duties, there would be a less recognition of quackery and more appreciation of scientific medicine on the part of the politicians and public, and with this a more satisfactory status socially as well as politically.

Let us, then, strive to be loyal to ethical principles, with an unselfish devotion to honor and right, eager for the progress of medical science and the improvement of humanity.

A recess was had until 6.30 P. M., at which time a banquet was served at Wenonah Inn, Dr. George E. Reading acting as toastmaster of the occasion. The following were present:

Members—Drs. George C. Laws and wife, Luther M. Halsey and wife, Harry A. Stout and wife, J. Gaunt Edwards and wife, George E. Reading and wife. Howard A. Wilson and wife, William Brewer and wife, Henry B. Diverty and wife, Samuel F. Ashcraft and wife, Charles S. Heritage, George W. Bailey, James Hunter, Jr., and wife, E. Z. Hillegass and wife, E. T. Oliphant and wife, P. E. Stilwagon, Samuel F. Stanger and wife, Cyrus B. Phillips and wife, Joseph M. Husted and wife, Charles M. Burk, Albert Porch.

Honorary Members—James Tyson, Charles S. Turnbull, Mordecai Price, E. E. DeGrofft and wife, W. H. Iszard and wife John B. Roberts, Judson Daland.

Guests—Drs. William B. Atkinson, S. D. Risley, Richard Slee, William Green, Daniel M. Stout and wife, D. H. Oliver, W. S. Long, Ellsmore Stites, Henry Chavanne, W. H. James, H. W. Elmer, T. J. Smith, William Elmer, Chas. W. Wilson and wife, J. G. Halsey, Chas. C. Phillips and wife, H. A. P. Neal, Justus Sinnickson, James M. Ridge, B. T. Shimwell, Charles Noble, Joseph Hurff, Hon. A. W. Carey and wife, Hon. R. S. Clymer, Rev. S. O. Garrison, Rev. Wright Eckersley and wife, Rev. R. Hilliard Gage and wife, and Messrs. A. S. Barber, Jr., Charles Rulon, Edward I. Berry, Chas. C. Harrison.

At the conclusion of the banquet the toastmaster said: "*Ladies and Gentlemen*—I have to propose to you now a toast and I hardly know how or in what way to propose it. It is something with which we have had peculiar relations. You may have all seen an account some time ago, where a mother and daughter married a father and son, and the question is, if they had children what relation would they be to each other? This is a little the same way. The American Medical Association really, I suppose, claims to be the mother of us all, but it happens that we are the son or daughter, as you may like, of the State Medical Society of New Jersey, which is about a hundred years older than the American Medical Association. Now, if you can hunt up the relationship, it is more than I can do, but I will call

upon the honored secretary of that Association, Dr. William B. Atkinson, and he may give us some light on the subject."

Dr. Atkinson: "*Mr. Toastmaster, Ladies and Gentlemen*—It seems to me that when I come into New Jersey, although not born within a good many miles of New Jersey, that I am right at home. My good father, thanks to his forethought, was born in New Jersey, and my grandfather's grandfather was one of the originators of New Jersey. I believe he came here when it was a sand bank, before the various mountains which you have displayed in so many parts of New Jersey had been organized. Therefore, I may claim that New Jersey has a claim on me.

"I like New Jersey. Many of the pleasantest hours that I spent in my boyhood's days were spent around this neighborhood. I had a good old uncle - one of my favorite uncles. We were very good friends, except in politics; my old uncle was an Andrew Jackson Democrat and I was a Henry Clay Whig, and the consequence was we never could agree when we met. My old uncle lived down here at Mt. Ephraim—I believe that is not more than a hundred miles away—and I used to come down whenever I could to spend a pleasant time with uncle. For that reason, I feel at home in New Jersey. I have been with New Jersey men, especially New Jersey medical men, on a good many occasions, at the County Medical Associations, at the State Medical Associations, at the Sanitary Associations, and so on, and for that reason I always like to go to anything that is going on in the State of New Jersey.

"If you want me to talk about the American Medical Association —well, I presume there is a special reason I should speak about the American Medical Association, insomuch as I have had the honor to occupy a position in that Association for now over a generation; thirty-four years I have had the honor of being its permanent secretary. As to the relationship between the New Jersey State Medical Ssciety, the Gloucester County Society and the American Medical Association, I acknowledge it seems that the children and grandchildren were born a little while before she was—somewhat mixed up that way, but you must look upon the American Medical Association as a foster-mother and one who is leading you on to make the standard of education higher throughout the whole United States, and one that has led to the organization of medical men and medical women, I may say, throughout the whole United States; and during the time that I have

occupied the position of secretary I have seen that organization climb up from four hundred members to eight thousand, and its membership now is a little over eight thousand. Its journal, which appears every week, has a circulation of eleven thousand copies, and it is especially devoted to uniting the medical profession everywhere throughout this great United States and making them better medical men.

"I say medical men. Perhaps I should be allowed to say a word there, and you will all understand the matter. If there are any medical ladies here, you understand that the medical men embrace the medical ladies. (Laughter). Therefore, I made a mistake; but you understand that when I say medical men, it means them both. Throughout the United States organizations have been formed within the last thirty-three years, which have made now a State or Territorial organization in every State and Territory of the Union. Wyoming, which was the last one organized, is now in its fourth or fifth month. It is organizing medical societies in every county, so that, following the good example set by New Jersey, the States all over the country are rapidly becoming organized, as they should be, with State societies and county or district societies. Now, we have taken a great deal of information from your body. When I have been called upon, as I often am, to furnish a skeleton of a medical organization for some new county or district, I have a great habit of following the line that has been adopted throughout New Jersey. You have a magnificent State organization, and that, reacting upon your various counties and districts, makes those of great value.

"Now, on the subject of the American Medical Association, there is one thing that every medical man and woman should think of—the stronger you make the American Medical Association, the more powerful you make the medical profession for good. The American Medical Association comes now with the strength of eight thousand members and demands of Congress what it shall have. Now, if instead of eight thousand, it had eighty thousand, as it should have, if there are eighty thousand respectable, reputable medical men and women in the United States, look with what a sledge-hammer force the American Medical Association would come to Congress and say, 'You must give us the legislation we demand.' Thus, for instance, for now nearly ten years I have been a member of a committee appointed by the American Medical Association to obtain a National Board of Health. We want it. Every medical man and woman in

the United States feels the importance of a National Board of Health. And why don't we get it? Simply because the American Medical Association has not strength enough, has not enough members to say to the members of Congress, 'You must give us a National Board of Health.' Now, look to it; look to where you are failing. Look to it that every member of this organization, to commence with, shall, as soon as they possibly can, send their names to the American Medical Association and become members of that organization.

"You get a good *quid pro quo* for what you confer. You become a member. You have the Association to back you up in everything you may require. You aid the Association in its work. You get, every week, a journal which is itself a volume of medical lore, and for that reason every member of every medical organization should join the American Medical Association. You will never regret it; and what is more, those of you who have gone to the convention of the American Medical Association, as I know a number of you have, at Denver, last year or rather early this year, can say, as I say now, that to go to a meeting of the American Medical Association makes you want to do it next year, and especially if you were sensible enough to take your wife along. Remember, if you go to a meeting of the American Medical Association you can get all you want in the shape of medical knowledge, you can get all you want in the shape of medical association, and if you don't go for anything else than to have a good time, you will have a jolly good time, thanks to the various entertainments which they get up for you on these occasions. I think, my friends, that doctors, laymen and others who were at Denver that meeting, will acknowledge that they had a howling good time and went home satisfied.

"I thank you, gentlemen, for the courtesy you have shown me in calling upon me to speak this evening, and I only hope that the other fellows who are going to talk will have the pleasure now of enjoying themselves as they have done at my expense. But, before I sit down, let me say to you once more, as soon as you get home send in your application to the American Medical Association, and do a little missionary work with your neighbors, so as to make that Association as strong as it should be."

The Toastmaster: "The State of New Jersey is distinguished for having the oldest medical society in this country. I think I can say that without contradiction. And also of being the first State in this

country which ever required an examination for a license to practice medicine, as this State did over a hundred years ago, when the State Medical Society was made the censor; and no one could practice medicine in the State of New Jersey unless they had a license from the State Medical Society. I have the pleasure of calling upon a member of the Standing Committee of that Society to respond to this toast—Dr. William H. Iszard, of Camden."

Dr. Iszard said: "*Mr. Toastmaster*—I know that I shall feebly represent and speak for the Medical Society of the State of New Jersey, for two reasons. One is my limited time for hunting up some data, and the other is because of my inability to speak to intelligent people such as we have here tonight; and had it not been for what you have already said, I might have been unable to have informed the friends how the Medical Society of New Jersey is. But you intimated about the age of the Society, and we will take that for granted that it is the oldest medical society—State Society—in the United States. And if my memory serves me right, after the doctors of the State of New Jersey had agreed to form a State Society, the suburban States took up the idea – such States as Pennsylvania and New York, contiguous to the State of New Jersey. They thought it was a good thing and they organized State Societies over there, and by the organization of those State Societies came the American Medical Association. So you see New Jersey probably has taken the foreground in the movements that attended the organization of medical men in State and National Societies. I think that is pretty good for New Jersey. And I believe those are facts.

"Now, I am also aware that I am speaking in the presence of a good many distinguished men from Pennsylvania, more than I ever had the pleasure of speaking to before, and these are some facts which have probably been overlooked by those gentlemen; and they would have gone on practicing their chosen profession for years and would never have known where their beginning came from. (Laughter). Now, to solve the question about the father and mother of these societies. That was indicated in my former remarks that there had to be State Societies before National Societies, so there had to be district societies or county societies before there was any Medical Society of New Jersey. That follows as a matter of course. The object and purpose of this organization was conceived and brought into action by pure and professional motives by the doctors living in the rural dis-

tricts, for there were very few cities then in the State and very little population. They thought and felt the need of an association. Living from ten to fifteen or twenty miles from a neighboring physician—just as Dr. Stout, here, used to be twelve miles from any other doctor, and almost from any patients, when he first commenced to practice—they began to feel the need of that; and out of this idea, as crude as it was, originated through the long train of circumstances that I will not take the time to speak of, the highest association known on the Continent, the American Medical Association."

"In the State of New Jersey, our medical society is well attended at its three days' session. Now, committees are appointed, it gets down to business, men are appointed to read papers and transact such business as would properly come before the executive body; and before the people there assembled from all over the State, as representative doctors, each medical district society being entitled to have so many delegates, they come there bringing the brains of their societies. And so, from all the societies thoughout the State, doctors rubbing against each other, brightening each other with their ideas, getting away from their routine work, imbibing something new to take home and dwell upon. It has brought the doctors of this county—not only this county but adjoining counties and adjoining States—together, and you have heard some very good papers read today, and some ideas given to you that I will guarantee not five men in this room tonight have every thought over the subject brought out by Dr. Laws' paper.

"Then a good many facts were brought out by Dr. Tyson in his well prepared and read paper, giving the contrast between the country doctor and the city doctor; and right here I want to say this, that a physician growing up in the city, practicing medicine in the city, knows very little about the trials and hardships and misery a country doctor has to endure. In the city there is very little trouble and, as intimated in his paper, nearly everything has run into specialism. If there is anything special the matter they run to the specialist, and that specialist is in one course of things, and he knows them thoroughly and mostly don't know anything else, but he knows them well. But the country doctor, living down at Berlin, where Dr. Stout lives, and living at Williamstown, where Dr. Halsey and some more live, called out at night, and if it is a broken arm or leg they can't send him to the hospital in the middle of the night, they haven't got any contrivance

to place the poor man in, but they must devise something out of their own head and think for themselves Or, if it is a case of hemorrhage, it must be stopped there; he cannot run and get his consulting physician; there he is, shut up with this family, who place implicit confidence in his ability to arrest the trouble. The country doctor should have the first seat in the other country, in my opinion, and then the general practitioner in the city the next, and then the specialists come in next. I guess I had better stop right there."

The Toastmaster: "Our State, in one particular, is somewhat like the ham in a sandwich; it is in the middle. We lie between two large centres of medical education, New York and Philadelphia, but have none of our own. It therefore becomes necessary for us to go out of the State to find some one to respond to the toast, 'Medical Institutions.' I will therefore call upon Dr. Judson Daland, of Philadelphia."

Dr. Daland said: "*Mr. Toastmaster, Ladies and Gentlemen*—I am glad I received an invitation to be present with you today, and as the toastmaster has well said, although I am an honorary member of the association, I also chance to live in the 'suburban State' referred to so recently. I am also glad to be here because of the large amount of information we farmers get when we come here. I confess we do not know much of the antiquity of the mother of the American Medical Association. We were not aware that New Jersey was the one who really gave birth of this organization; but we are learning these things tonight, and I am sure we are very glad. But, to be serious, I do agree entirely with what has been said. About some things we have heard from the President in his address, I quite agree with the former speaker that the information he gave us was not possessed by many men present; and I doubt very much if, in the length and breadth of the United States, you will find many men who have taken advantage of the opportunities that he has; and I, for myself, feel fully repaid for coming over and listening to this one paper alone.

"Although this does not bear on institutions or medicine, I would like to say that when we gather together as we did today, we naturally turn back to think of the days we spent in the college, to think of the beginning, and our minds turn to the many hours and days spent in the various institutions to which we have been attached, and I can quite understand how the toastmaster would propose selecting such a topic; but the thing I cannot understand is, how the toastmaster

selects his topic and the man at the same time. That is, I do not understand why he does not permit the unfortunate victim selected to speak on this topic, a few minutes grace to gather together a few thoughts on the case; but unfortunately I have not even had time to do that.

"Referring to our colleges more particularly, that are situated in the 'suburban States,' I think we may report excellent progress. We now have courses that are exactly adapted to the wants of the students; and in addition to increasing the number of months each year and the number of years before the degree can be conferred, you are all well aware that the reqirements for admission have also increased; and therefore it would be safe to say at the present time, compared with perhaps twenty years ago, that more than twice the amount of time is expected from the student now in the medical department of any of the large institutions of learning. But this, of course, is necessary because of the rapid increase in the total quantity of medical knowledge extant, due to the diligent work of investigators in many parts of the world. We can further, also, congratulate ourselves upon the fact that in few of these advances today, the necessity for making invidious comparisons between our own best institutions of medical learning and those in the older countries does not exist. We compare at the present time very favorably with some of the older institutions in the world, and our very best colleges have now a curriculum, a roster, so arranged that it is a question whether we are not on a level with the best in the world. It is a well-known fact that at the present time our surgeons, our gynecologists—perhaps we may include all physicians—all stand at the very top; and I, for one, am of the opinion that there are none in these particulars that surpass us, wherever we may go.

"Mr. Toastmaster, I have very little to add to what I said. I thank you heartily for the honor which you have conferred on me in calling upon me to speak; and perhaps I shall have the pleasure of meeting you all frequently in time to come. It seems to me, also, from the remarks I have heard, that the idea of bringing the wives of the members with them seems to meet with approval. I have heard a great many such expressions around the table. I thank you all."

The Toastmaster: "If there is one thing more than another which marks our progress in recent years, it is the better care which the State gives to those of its citizens who for any reason are unable to

care for themselves. This has resulted in all kinds of State institutions, State hospitals, hospitals for the insane, hospitals of all kinds; and it is one of the great landmarks of progress, not only of the medical profession, but of the progress of the general public toward taking care of these classes of individuals. And as it bears very particularly upon our profession, as nearly all these institutions are under the care, more or less directly, of the medical profession, I have thought of calling upon Dr. Mordecai Price to respond to the toast of "Our State Hospitals," or "State Hospitals" in general.

Dr. Price said: "*Ladies and Gentlemen*—I am greatly obliged for the honor conferred on me by our toastmaster. Replying to this subject, there is no more important subject brought before our legislature than the support, the proper support, of State hospitals. It is a question which is agitating the entire medical profession, and should continue to do so until it is put in some shape where it is to the greatest use of the community in which the money is spent. There is no question, in my mind, at all, but that the State should take care of all its helpless individuals. It should take care of the blind and of the deaf and of the consumptive, and should take care of its incurably sick. And if you will just for a short time investigate the question of how few of these helpless individuals—when I say helpless I mean those in the families of the poor—are able to give the necessaries of life, the necessary care and nursing and medical attendance to their poor, we can conceive of what tremendous good State help in this direction will do.

"I also claim that it is the duty of the State to take care of the helpless inebriate. He is made so by the laws of our State encouraging the liquor traffic, and if anybody in the community is benefited wholly and solely by it, it is the State. Now, if the State put upon a poor family a helpless husband or a helpless drunken father, or it may be a mother—for I believe as firmly as I believe anything that this becomes a disease as it goes on, a habit in early life it becomes a disease in old age—I hold that the State should provide and take care of these helpless creatures in their latter years, and lighten the load of a family for which burden it was itself really the encouraging cause in the beginning.

"But, sir, there is another feature of State hospitals, one that is robbing the profession every day and everywhere, and throwing into the hands of a few medical men who have political backing and politi-

cal influence, the use of the State money to take care of promiscuous patients. Why, in Philadelphia, you cannot stub your toe and fall down accidentally that you do not find yourself in an ambulance on your way to a hospital, while you may have a dozen cards in your pocket all addressed to your home, street and number. No, this is a wrong state of affairs, I hold that in all cases, under all circumstances, any State aid or State assistance should be strictly and wholly charitable; not a single dollar should go from the patient to the surgeon or from the patient to the hospital. They should be under the control of the State purely and simply, and they can get the ablest medical assistance in the world. There is not a hospital in any State of this Union that would not have a hundred applicants for every position, or that would not have a good man to fill it. I say, make a pauper of no one, but where the interests of the organizations and institutions of this nature make him one, let the public take care of him. But let all charitable institutions and public institutions of our country be as separate and distinct as day and night, and until such a course is taken, we will have the medical profession simply ekeing out a miserable existence.

"A few weeks ago, to show you the actual position of the medical profession in the hospitals in the city of Philadelphia, I had a boy thrown out of a window. I lived only a few squares from where the boy lived. I got out as quickly as I could, but the boy was in a hospital, ready for an operation, on an operating table, when I got there. The hospital was only a square away. It was not fifteen minutes, I know, from the time the boy was thrown out of the window until I was there. Now, those people were well able to pay anything or anybody to take care of the boy, and perfectly able to hire a nurse. Why should a public hospital be forced to take these cases in, or allowed to take them in? If we ever hope to keep the medical profession together and keep it as an honorable body, a body which is self-sustaining, we must stop this wholesale charity business of the support of the State for institutions, except for the helpless poor, and when we go beyond that we have gone beyond charity.

"Every town and village and city in the State of New Jersey today is filled with helpless poor, worthy poor—every one of them is worthy, and no matter what has been the cause of their poverty, no matter what the cause of their disease, we assume it as a Christian duty to take care of them; and the only way we can do so and not mortify

and degrade them, is to let the State take care of its poor. The State has a claim on every taxpayer within its boundaries for the amount of money it will take to do that which they believe to be right and just that should be done. There is no charity in it. It is our duty, and we ought to do it. But when we take care of everybody, no matter who they are, and take them off the street whether they are much sick or little sick, whether they are able to pay or not, and hustle them off to a hospital, it is all wrong." (Applause).

The Toastmaster: "Following out the line of State assistance to the helpless, New Jersey, to use a trite expression, points with pride to a new institution just recently opened, one that the New Jersey Medical Society claims as its own particular child, because it was through the efforts, largely, of the Medical Society of New Jersey, in getting each member to influence their local member of the Senate or Legislature, that the bill was passed which established this institution. I have reference to our epileptic colony at Vineland; and I have pleasure in calling on Prof. S. O. Garrison, who is connected with that institution."

Prof. Garrison said: "*Mr. Toastmaster, Ladies and Gentlemen*— I have a case, I think, for Dr. Laws, with his admirable analytical power, to diagnose. I will be glad to have him tell me, and if this company will release me from making this speech, I will retire with him and ask him to tell me, why my heart palpitates so much now. I think, if he will diagnose the case, he can find the difficulty. I shall be glad to have him take me aside for half an hour, until you are weary waiting for a speech, and then I will not have to make it.

"I think it is with the suggestion, possibly, that I may tell this little story that the toastmaster has told about epileptic matters, and therefore, forces me, perhaps, into some personal suggestion. I became very much interested some five years ago in the classification of defectives in this and other States. In connection with that work, I was very anxious to see a medical man living in the State of New York, with whom I had corresponded. I went to him at the close of a meeting, and reached out my hand, said: 'Good morning, Doctor; I suppose you don't know me?' 'Yes,' he said, 'I know you—you are the fit man.' So I thought on this occasion, certainly I was not the 'fit' man; and after Dr. Stout finally suggested that I should speak, I concluded emphatically that it was a misfit, and told him my

experience. As he suggested the idea to me about twenty-four or thirty-six hours ago, that I was very like the Irish in one particular, and that was, if I got off a talk, I was not sure it was a talk; and I was very unlike them in another respect, that I was not conscious of possessing the power of witticism. And so I said, 'It is certainly out of place to ask me to come, particularly amongst the doctors, to make a speech on State Hospitals'—that is the one he asked me to make—'and I shall simply make a dunce of myself in attempting to speak to doctors on the question of State Hospitals.' And, therefore, he intimated that I might come up and talk for a while in the afternoon, if anyone wanted to ask any easy questions, which I might happen to be able to answer, along the lines of the things which particularly interested me in connection with the work for the feeble minded and epileptic.

"Our good toastmaster is astray in his thinking as to epileptic just a little, for I know he knows it is not quite a fact that the epileptic colony is located at Vineland. I shall be very glad to correct that, though, here and now; and perhaps it will be well, under existing circumstances, if I shall take the cue as given me and make my speech along historical lines. I regret, however, that the force of circumstances seem to compel me to say things which shall have, perhaps, too personal an aspect, and I beg you, therefore, in advance, to excuse me if I shall say some things tonight that have something of a personal reference.

"About five years ago I became personally convinced in my work for the brain-sick and feeble minded children in Vineland, of which I happened to be principal—five years of previous work, making ten in all—that there was a great mistake made in this and every other State in the Union, destructive, financially, in its results, destructive, medically, in its results, destructive, socially, in its results, and destructive, educationally, to all who were capable of receiving education. And I found myself rather thrown against the medical profession in the exercise of their judgment as given to me in the conduct of the work for the epileptics and feeble minded among our people everywhere, not only in this country, but in every country on the face of the earth. And so, as a result of my study, I said, 'There ought to be in this State'—I did not know at the time there was any institution in the world devoted exclusively to the epileptics—I said, 'Epileptics have no business to be in our insane asylums; they have no

right to be in our schools for feeble minded children. They ought to be by themselves under a competent physician all the time; for if insanity is a disease, epilepsy is more a disease.' So I began to do what work I could in a humble sort of way, and at last had a bill presented to the Legislature for a commission to investigate epilepsy in a general sort of way, as related to individual treatment.

"That commission was appointed over two years ago. We worked as well as we could on that subject, and wrote a bill, which was passed unanimously by the Legislature over two years ago, but Governor Griggs vetoed the bill. Then there is no doubt we were all discouraged, physicians with the rest of us; we were very much discouraged, and I said finally in desperation, 'I wonder, Dr. Parker, if you can get the Medical Society of this State to take this thing up now and fight it through to a conclusion?' And I am glad to say that at the next session of the Medical Society, it took up the subject, and paid some attention to the matter—not a very great deal for that year—but last year they appointed a committee, and that committee worked the matter up very successfully, until a bill was passed at the last session of our Legislature in this State, and $15,000 was appropriated for the establishment of an epileptic village—that is the proper name, by all means—and the only one in the United States, and perhaps in the world at the present time. That bill was passed, Governor Voorhees signed it, and six Managers were appointed.

"We have met and organized and selected a site, not at Vineland, but a site at Skillman, about half way between New York and Philadelphia, about a mile and a quarter from Skillman's Station, in Somerset County. This site contains about 187 acres. It has on it two or three small buildings and one large mansion, seventy feet long, which will accommodate about twenty epileptics. We have a bargain in that property, paying for it only a little over fifty dollars an acre. Among the best farm lands in this State, gentlemen, and only about fifty dollars an acre have we had to pay for the securing of a property on which is a seventy-foot mansion, with high ceilings—a building admirably adapted for the residence of epileptics. That building was bought only ten days ago; we will pay for it during November and expect to begin in November. We shall take only male epileptics at first, and probably only those who are more capable and able to assist in the organization of a new work.

"That institution, gentlemen, was located with a view to getting a

number of important things. The physicians, I think, will be interested in this matter. First, we said, we must have excellent farm land. so that the epileptics would have ample room to work out in the open air. We next thought, of course, we must have good drainage, and so we have, beautiful elevations. Back of this we have two streams running through the two farms - we have bought one and taken an option on the other, making a total of 400 acres, and we have two streams which are flowing on the second farm, which we have not purchased yet. We wanted to get away from the centres of population, and yet not too far away. We wanted to get on the line, not only of national travel between New York and Philadelphia in our State, but we wanted to get in the line of international travel as well; for everyone that goes to New York goes to Philadelphia, and everyone that goes to Philadelphia goes to New York. So we have located our epileptic village—don't call it a colony—in New Jersey, for we want to be on the line of the railroad; and therefore they will come so near to the village on the line of the Philadelphia & New York Railroad they will have to stop off and see the finest institution presided over by anyone in the world, as we think it will be after a while, when we select that man who has so much brains and so many of those acquisitions that Dr. Tyson referred to this afternoon. And I want to say that I was really inspired as I listened to his address this afternoon.

"We want just such a broad man as he spoke of to take hold of this work, and he will find himself in close proximity to the best medical talent in the United States—if that is not in Chicago it is near Philadelphia and New York; so that the sufferers in those two cities will get easy and quick access in a very short time to our epileptic village in New Jersey, and produce, therefore, in the end, the largest possible scientific and medical results, for we are so related to the chosen territory of Pennsylvania that these results should come. We have twenty-five acres of grove there—a beautiful place for epileptics to come and spend their days. I know that my good friend, Dr. Halsey, will say, now that he has heard of this location, that we are, so far, in advance, in our work in New Jersey for epileptics, of the the State of Pennsylvania, although they have started a good institution there in Pennsylvania.

"Now, I am taking too much time. That is one thing I am afraid of, that if I get started I won't stop. But there were two or three

things I wanted to say to the medical profession, and one of them is this, that is, the great necessity as well as the wisdom of the classification of defectives. It is all wrong to put the insane and epileptics together in the insane asylums. It is all wrong and expensive to put in an institution, a training school for feeble minded children, epileptics, that belong especially to medical care; and it is all wrong, from a financial standpoint, to take idiots out of society; and I mean by idiots those animals, speaking respectfully, those animals that are lower than the horse. That is true in speaking of idiots, and I think there is no better way to term them. An idiot is one that cannot be taught anything. We may improve him in his habits, but I speak out of experience and enthusiasm, and I speak with a perfect conviction that no one has any business to engage in the work of training the feeble minded who not only has a love for the work but a distinctive calling for the work.

"Now, there is nothing to arouse enthusiasm or awaken that calling, that spirit that he calls a call for the work; there is nothing to awaken it in a perfect congenital idiot, and the State has no business to be required to support an idiot at the expense of a sick child, and our institutions have no right to be placed upon the level or guided by that classification. The idiot can be kept cheaply; the feeble minded child ought to be taught by the best teaching talent that can be gathered around that feeble minded child, and not be compelled to associate with the idiot on one hand or with very many of the epileptics on the other hand; and then the results are absolutely surprising, even to those who work among these feeble minded children. So if the medical profession would study that thought a little while, I think they will agree with the idea I have had for years, that if a one-hundredth part of the attention were paid by the medical profession to the study of epilepsy that has been paid to the study of insanity in the last century, the results would be a thousand times greater. I believe the subject of epilepsy has not been thought out by the medical profession, and if I have done nothing else in these few remarks than to interest you in epileptics, I shall be very grateful.

"Thanking you for your attention and begging your apology for taking up so much of the time, and promising, Mr. Toastmaster, I will never do so again, I say good night."

The Toastmaster: "The medical profession is often associated with the legal profession, possibly more often than any profession except

that of the undertaker. I have great pleasure in calling upon the Hon. Robert S. Clymer to respond to the toast, 'Medical Jurisprudence.'"

Mr. Clymer said: "*Mr. Toastmaster*—I would wish that my voice was in somewhat better order, that I could make you hear me with more pleasure to yourself and comfort to myself; but as long as you have called on me, you must take the consequences. 'I think if you can stand it, I can. I am by no means sure why I should be called upon to respond to this toast. I think that the world-at-large has a general idea that the medical profession is a rather cruel one at times; in other words, it delights to give doses which it doesn't like to take; and yet, at times, though, when you perform what I think you call a minor operation, inflicting a slight pain, and the pain is so instantaneous that before a person can say, 'Oh, it hurts,' the hurt is over and the relief has come, I am ready to say it is a good kind of cruelty; and so I say, gentlemen, you are rather cruel, but it is a good kind of cruelty.

"'I don't think it is right,' I have had many medical men tell me, and I have had it submitted as a medical authority, 'that anyone should work on a full stomach,' and yet you go on and say, 'Now, talk nice, give us something nice,' and all that sort of thing. What are you going to do? You can't help it. Yet, I have often thought on these occasions, it was a good deal like Cochran, the great Irish wit, said. He was trying a case on one occasion and his lordship was on the bench—my heart is not going pitty-pat, Mr. Toastmaster, I have done this thing often; I am only giving you something I have done often. The judge sat there and would shake his head every once in a while. Cochran noted it and saw the effect it was having on the jury. He said, 'Gentlemen of the jury, you may have noticed, men have peculiarities. Some do one thing and some another thing. Probably when I am speaking I have a habit of waving my arms, or lifting my hands out—something peculiar to me, different from what anyone else would do. Now, his lordship has a peculiarity. You might have noticed that every once in a while he shakes his head that way. You might have thought he didn't agree with me; but no, that is not the fact at all. Gentlemen, there is nothing in it.'

"So when I get through with this speech of mine you may say there is nothing in it. I don't want to detain you. I only want to give you one thought. In case you open your minds and permit it to have a lodgment there, I will accomplish everything I expect. It is

according to the materials, you know; if you have better materials you can make a better job. Considering the mentality of the materials I am dealing with, if I can get one thought lodged there I shall be happy. There is no such thing in strictness as medical jurisprudence. There is a famous work written, Wharton and Stille's 'Medical Jurisprudence,' and I know other works on medical jurisprudence, but there is no medical jurisprudence as a matter of fact. There is such a term. If we could get together and define what we mean by a term it would save lots of argument. Starting out from the standpoint of what we understand to be medical jurisprudence, I haven't any doubt but what there is such a thing, but in law there is no such thing as medical jurisprudence. There is jurisprudence, and that is all there is to it. You can have equity jurisprudence; that is a branch of the law, but it is not equity jurisprudence in and of itself. Jurisprudence is only one thing. There are two sides to the law business; that is, I mean, two sides to the proposition as to what constitutes law. There is the common law side and the equity side, but it is all law. So there cannot be such a thing as medical jurisprudence.

"But there is something we call medical jurisprudence, and that has grown out of the very thing that has been so much abused—the difference which medical men either have had or which they have permitted themselves to be induced to have. You understand, I yield to no man in reverence and respect for the medical profession, but you, unfortunately, have had, like all other professions—there is no one in the world that is exempt—you have had a number or a certain quantity that have crawled in, who have not been worthy to be there. Unscrupulous lawyers have not hesitated to employ unscrupulous physicians, and unscrupulous physicians have not hesitated to give biased testimony, out of which has grown a so-called state of affairs which is not jurisprudence, but is a perversion of the thing. We have heard experts. I might as well call each one of these gentlemen and ask him if he is an expert. Why, certainly you are. Your line of work, your line of life, your whole idea is of being as expert as you can to relieve the sufferings of your fellow-men. I have seen the most earnest men go on the witness stand, one tell the jury that the other don't know what he is talking about of this medical jurisprudence, so-called. I say, the profession owes to itself that such a thing shall not grow. It is a festering sore; cut it out before it eats into your vitals. I say that, as a friend to the medical profession.

"Now, I knew it would be just as I told you in the beginning, there was nothing in what I would say to you; and I have often wondered whether these toasts and the people who are called upon to respond to them are not all in the position that Eugene Field said about the 'Conversazione.' He was giving a description of one out West, and he said this, that you are supposed to talk in a language 'in which you are particularly weak.' So I suppose the toastmaster wanted me to talk about a subject of which I knew very little. Having talked about that, I want to say to you that Gloucester County is to be congratulated upon having within its borders a society so old, so prosperous, and which is composed of members who would be an honor to any county. Gloucester County is glad she has within her borders a society composed of such gentlemen."

The Toastmaster: "We have with us tonight a number of men who are engaged in medical teaching. That, of course, is the foundation upon which the whole profession rests. As we are taught, so are we in after life, largely. It is an old saying that 'as the twig is bent the tree is inclined.' So our medical teaching is the most important thing about us, taking us as a profession, and I will call upon Dr. John B. Roberts to respond to the toast, 'Medical Education.'"

Dr. Roberts said: "*Ladies and Gentlemen*—There are two kinds of people who make speeches, those who have something to say and those who have to say something. Now, you have heard those who have something to say, and now I have to say something on medical education. The greatest enemy to medical education is medical colleges, because they have been doing just what our friend on the other side there said. The true friend to medical education is the State Medical Society, the County Medical Society and organizations of that character, and those of us who have been engaged more or less in educational thought and work on one side and another are coming to recognize the fact that it is the State and county societies which have driven medical colleges to medical education. The high standard of medical education has been spoken of by Dr. Daland, who has given voice to sentiments of which I heartily approve. We are conscious that the medical facilities of this country are equal to any of those in the world. It has not been done by medical teachers, but by medical societies. Medical societies took hold of it some twenty-five years ago, requiring them to give a higher standard to their teaching. The State Board of Medical Examiners, which you know well and which

you are familiar with as one of the best, because it recognizes no schools and no qualifications, is very much better than many of the others in the surrounding States.

"You can only accomplish that through the activity of your own members. While those in other States have been unable to accomplish that for one reason or another, it has been a wonder to me how much New Jersey has done in the way of organization of medical societies. Here is the Gloucester Society, nearly a hundred years old. As you know, one of the oldest medical journals in the country, the *Medical and Surgical Reporter*, was born in New Jersey. And curiously enough it has no colleges. There were two schools, one near Haddonfield and one in Jersey City. It is a curious thing that you have done, through your societies, more in many respects than many States have done in advancing medical science, although you have never had a school in the State. It has not turned out upon the community a lot of uneducated doctors. You have, therefore, a proper feeling of contentment that you live in such a State."

The Toastmaster: "I call upon Dr. Stites, of Bridgeton, to respond to the toast, 'Our Guests.'"

Dr. Stites said: "*Ladies and Gentlemen*—The slight amount of pleasure which my good friends Drs. Halsey and Reading will derive from my discomforture will certainly be more than counterbalanced by the disappointment this assembly will receive in my endeavor to dispose of such an interesting subject. I take it that when he speaks of our guests, he means our lady guests. Now, just why our toastmaster should neglect to place upon the list of toasts one of the most important subjects of the evening, I cannot say; neither can I say just why he should have the audacity to ask for an impromptu response from, certainly, the most inexperienced member of this assembly. I cannot say, unless he takes it for granted that I know none of the imperfections and, consequently, nothing but the good qualities pertaining to the gentler sex, and that is true. My relations with those people have only been as a son and as a boarder. The only women that I have had much experience with have been my mother and my boarding mistress at school, both of which have added greatly to my comfort and for whom I have the highest regard. I shall ask, then, to be relieved from a subject so broad and extensive as this, with the thought that all I know of them is good, and my idea of the women-

folks is that they are God's best workmanship; and I can only say, God bless them.

"Before I take my seat, I would like to say that I am from Cumberland County—Bridgeton—and it seems to me that your sister society from Cumberland would be lacking in common sensibilities should she not in some way show her gratitude for the kind consideration she has received at your hands upon this, your eightieth anniversary. We can almost claim to be your twin sister; certainly, with your permission, we could, for there is scarcely a day's difference, as nearly as I can gather, in our ages. Cumberland County Medical Society was organized on December 8, 1818, which would make our eightieth anniversary occur on the eighth day of December in the present year; so we can almost claim twin sistership. Our society, too, is certainly mindful of the fact that while we have been remembered by the Gloucester County Medical Society at ordinary times and under ordinary circumstances, we have also been remembered in your jubilee. So I speak for Cumberland County when I say that you have our sincere and hearty thanks for this compliment so generously paid us. Dr. Oliver and myself have once before, I believe, been the recipients of your courteous treatment in regular session, at Woodbury, and we were, as a matter of course, very anxious to return the visit.

"Now I, for myself, can say that I am heartily glad to be with you to participate in this, your celebration of your eightieth anniversary. I have been instructed professionally, and I have been entertained and refreshed socially. I have met those who were my teachers at school and for whom I had the highest regard, and I have met those who were seated with me upon the benches. I have renewed old acquaintances and made many new ones, for all of which I feel very grateful. I again thank you for this opportunity, and I wish you many happy returns of this day, trusting that your honorable and worthy society may be even more prosperous and useful in the future eighty years than those in the past."

The President: "Owing to its being near train time the remaining toasts will have to be omitted. Thanking you for your kind attendance at our anniversary, and hoping you have all enjoyed yourselves, we will say good-night."

MEMBERS OF THE GLOUCESTER COUNTY MEDICAL SOCIETY PRESENT.

Regular Members—Samuel F. Ashcraft, George W. Bailey, William Brewer, Charles M. Burk, Henry C. Clark, Henry B. Diverty, J. Gaunt Edwards, J. Frank Fisler, Luther M. Halsey, Charles S. Heritage, Eugene Z. Hillegass, James Hunter, Jr., Joseph Marshall Hustead, George C. Laws, Eugene T. Oliphant, Cyrus B. Phillips, Albert Porch, George Evans Reading, Samuel F. Stanger, P. E. Stillwagon, Harry A. Stout, Howard A. Wilson, B. A. Waddington.

Honorary Members—Judson Daland, E. E. DeGrofft, Hobart A. Hare, William H. Iszard, John J. Kromer, E. E. Montgomery, Mordecai Price, John E. Roberts, Charles S. Turnbull, James Tyson.

HUDSON COUNTY.

To the Chairman of the Standing Committee, &c.:

Like my predecessor, I may say that I am very, *very* much hampered in receiving but one single reply to the interrogatories sent the members of our society, which your Committee furnished me some weeks ago. The sanitary and hygienic conditions all over the County have been, according to reports, exceptionally good during the past year. The percentage of contagious diseases has been lower than for many years.

The physicians in our County have been doing good, faithful work, and to them is due, in a notable degree, the present very desirable conditions. The death-rate for the past year was never so small since the establishment of the "Bureau of Vital Statistics."

It is my happy privilege to be able to state that during the past year the common enemy of man, called Death, has left the Hudson County District Medical Society severely alone.

At our annual meeting in May, several new members

were elected. The business of the meeting was harmoniously conducted, after which the Dinner Committee provided us with a very delightful banquet, it being twelve o'clock before the motion to adjourn was in order.

HENRY H. BURNETTE, *Reporter.*

HOBOKEN, N. J., June 9, 1899.

HUNTERDON COUNTY.

To the Chairman of the Standing Committee, &c.:

Our society is evidently composed of modest, unassuming men who do not care to rush in print to exploit their marvelous sayings and doings. This may be accounted for, at least in part, by saying that we have no sanitaria in our midst whose health-giving air and improved methods only need to be known to be appreciated; no specialists with statistics so satisfying as to give hope of cure to all the afflicted, not actually moribund. Our members, moreover, do not aspire to the dignified position of curing *every* case of typhoid fever they chance to meet, and as to sarcoma and carcinoma, they probably agree with the late Dr. Holmes in thinking that successful treatment of these unfortunate cases depends largely on having them in time—say a few generations before the subjects were born.

While it must be conceded that these virtues, if, indeed, such they may be called, have but a negative value, yet, in comparison with what we not infrequently see and hear in professional circles, are they not, to a certain degree, commendable? Let this question be answered as it may be, there remains the undisputed fact that the possession of them does not materially assist your Reporter in complying with the requirements of the

Medical Society of New Jersey, as only one of the members thought it worth his while to reply to the circular letter sent out asking for information, and he had "nothing of importance" to offer.

It may, therefore, be taken for granted, that so far as the "prevalence of disease in the County" goes, there is none—at least none to speak of; and as to "interesting cases reported and read before the society," all depends on what is considered interesting. Evidently the most of them making these reports did not regard them as falling in this category, as your reporter was furnished with an abstract of but one.

In extenuation of these short-comings, it may be said that the two regular meetings of this society were well attended. At the October meeting, Dr. G. L. Romine and Dr. E. W. Closson submitted a report of "An Epidemic of Typhoid Fever in Lambertville, N. J.," which appeared in *The Philadelphia Medical Journal*, November 12, 1898. At the April meeting, Dr. Peter McGill, of Lambertville, favored us with an interesting account of his experiences and observations during the late war, as assistant surgeon on board the "Resolute."

During the past year one of our oldest and most efficient members, Dr. A. M. Cooper, has passed away. An obituary by Dr. E. D. Leidy appears elsewhere.

G. N. BEST, *Reporter.*

MERCER COUNTY.

To the Chairman of the Standing Committee, &c.:

Interest in the work of our society has continued unabated during the past year, as the well-attended meetings held regularly from month to month have

shown. During the year, a number of valuable papers and reports of many interesting cases were presented before the society.

Dr. Charles P. Noble, of Kensington Hospital for Women, a guest of the society at its annual banquet meeting held in the autumn, read a highly appreciated paper on "Conservatism in Gynæcology."

A paper by our President, Dr. John Bruyere, on "Progress, Problems and Prospects in Medicine," was deemed worthy of larger audience, and ordered published by the society.

Mr. David Warman read a paper on "Turko-Russian Baths from a Medical Standpoint," and brought out their value in myalgia, neuralgia, chronic rheumatism, syphilis, etc.

Dr. H. G. Norton's paper on "The Need of a Medical Library for Trenton," led to the taking of steps toward what is hoped will be the placing of this desirable object on a permanent and progressive basis.

Dr. Ira M. Shepherd read a paper on "Certified Milk; how it can be procured," which gave expression to a wish for better things to come in the matter of our municipal milk supply, and consequent improvement in longevity tables.

Dr. R. R. Rogers, Sr., reported "A Case of Priapism." Young man, æt. 19, taken with high fever, cough, pains in chest, blood and pus in sputum; was put on cough mixture and had five-inch fly blister applied to chest. Soon there was retention of urine, requiring catheterization for five days, accompanied by priapism, which continued nineteen days and terminated spontaneously, treatment seemingly producing no impression.

Dr. Frank V. Cantwell reported "Six Cases of Nephrectomy." 1. Adult male; back injured by fall into

a trench; operation revealed rupture of kidney. Death in three days from exhaustion, due to profuse hemorrhage prior to operation. 2. Male, æt. 24; bedridden, symptoms of stone, hæmaturia, tenderness over right kidney, but no tumor; operation; incision parallel to last rib; pelvis filled with hundreds of small stones; kidney removed. Recovery. 3. Female, æt. 28; pyuria, loin pain, tumor; operation; large perinephritic pus collection; kidney filled with cheesy pus; drainage. Recovery with sinus, which was cured by subsequent operation. 4. Male, æt. 35; back injury; admitted to hospital ninety minutes afterwards; walked up-stairs; gave symptoms of hemorrhage; immediate operation; kidney completely pulpified and contained large stone. Recovery. 5. Child, æt. 2 years; supposed to have worms; found large tumor behind liver; albuminuria; diagnosed sarcoma of kidney; confirmed by operation; removed three-pound tumor. Recovery complete and in three weeks. 6. Male, æt. 31; lateral lithotomy several years before; pain in back; pyuria; painful defaecation; tumor outlined and yielded pus on aspiration; operation; no stone; typical surgical kidney; drainage. Recovery.

Dr. W. McD. Struble reported "Eight Cases of Toadstool Poisoning." They presented the unique fact of a complete chain of evidence establishing the identy of the variety causing the poisoning, viz: Amanita Phalloides, and through the notoriety given the affair by the daily prints attracted the attention of the authorities at Washington, D. C., who sent their representatives to study the matter.

All the symptoms presented were practically the same in all the cases. It suffices to summarize them as follows, namely:

Vomiting—abundant, frequent, painless, sero-mucous,

beginning from nine to eighteen hours after ingestion of the poison, continuing for many hours and evidently of centric origin, there being no symptoms of gastro-intestinal irritation, such as pain, tenderness or distension of the abdomen.

Cardiac Depression—developing several hours after the beginning of the vomiting and manifesting itself by coldness, weakness, rapid pulse, indistinct heart sounds—in a word, asthenia, which in the fatal cases prevailed several hours before death, and in the recovered ones persisted for several days, yielding only to the most energetic measures.

Diarrhœa—small serous, frequent, seemingly insufficient to cause the intense concomitant cardiac depression, and probably due to simultaneous intestinal vaso-motor paralysis, which permitted serous leakage into the bowel.

Cerebral Symptoms—marked by their absence.

Termination—in the fatal cases, three in number, death in from forty-six to fifty-four hours from heart failure; in the non-fatal cases, a slow return of strength and heart action, with irritable stomach for a number of days.

The Amanita family is responsible for most cases of toad-stool poisoning in our section of the country. Yet only three or four of its many varieties are found to be dangerous, and of these three or four varieties, but two are known here, namely, Amanita Muscaria, or Fly Amanita, whose poisonous principle, muscarin, is well known; and Amanita Phalloides, whose virulent principle is a tox-albumin, called phallin.

Dr. Alex. Armstrong reported "A case of Trichiniasis," which fell to his care in the service of Dr. F. A. Packard, at the Philadelphia Hospital. *Case*—Male, white, æt. 28. Had slight chill and vomiting three days before admis-

sion. On admission, face, eyelids, forehead swollen like erysipelas; pains in muscles of thigh and legs; temp. 104, pulse 102, resp. 24; intense thirst; insomnia; urine 1027, granular casts; blood normal: sputum negative for T. B. Had periods of rapid respiration and dyspnœa; later had œdema of feet and legs, with marked tenderness. A piece of outer head of gastrocnemius muscle removed and subjected to microscopic examination showed presence of trichnia spiralis. A piece removed from other leg and fed to white mice caused death in two weeks, the parasite being recovered, post-mortem, from the muscular coat of intestinal wall. Treatment was symptomatic, the disease finally terminating spontaneously by calcification of the parasite.

Dr. G. N. J. Sommer reported: 1. "A case of Puerperal Sepsis treated with Streptococcus Antitoxin, Marmorek." *Case*—Young German woman, æt. 19. Seen three days after labor; temp. 104, pulse 140, resp. 30; vomiting; marked abdominal distention; pain over right lower abdominal quadrant; intense thirst; constipation. Was put on ℞ cocaine hydrochlorid gr. $\frac{1}{8}$, phenacetine gr. iv., bismuth subnit. gr. v., every two hours until vomiting was controlled; also had carbolized vaginal douche. Late in the day had an injection in the thigh of 10 c.c. of serum, also had intra-uterine douche and sat. sol. mag. sulph. every hour. Next morning had normal temperature, pulse of 120, and profuse stools. In the evening temperature again rose to 104 and pulse to 120; 10 c.c. of serum were injected under right breast. Next morning temperature was normal, pulse 88. Two days later temperature rose to 102 and pulse to 120. A third injection of 10 c.c. of serum was made, this time under left breast. Temperature soon fell to normal and remained so, patient making a good recovery.

2. "A case of Pontine Hemorrhage, right-sided." Male, white, æt. 57; very fleshy. Had sub-occipital headache on right side and dizziness on looking upward, for two weeks; was then suddenly seized with dizziness and in a few hours developed a hiccough which ceased neither waking nor sleeping. Had hemianæsthesia, slight hemiparesis on right side, absent knee-jerks, diplopia with one object above the other, unequal pupils with contraction of the left, persistent singultus and no change in pulse or temperature. Patient gradually improved and at time of this report seemed practically well.

Dr. C. F. Adams reported "Some cases of Meningitis." Six cases were detailed which claimed the attention of the meeting and later were freely discussed.

The grim gleaner, Death, has left our ranks unbroken during the past year, which gives us cause for rejoicing, one and all.

Inquiries as to the prevalence of disease in the county elicited but one response, that of Dr. B. W. McGalliard, health officer for the city of Trenton. It is worthy of quotation in full, as follows:

"The work of the health office of a city is, necessarily, largely of a routine character, but there are some matters that may be of interest in Trenton's sanitary efforts. The water supply gives concern to the thoughtful. It comes from the Delaware river, which is, of course, more or less of a drainage canal. Typhoid fever, the chief water-borne disease, is not present to an alarming extent, but the fact that it is always with us suggests that an improvement in our water supply is possible. The mortality from typhoid fever in 1897 was 22.2, and during 1898 was 24 8 per 100,000. We have in process of construction a new and larger reservoir which will give more opportunity for sedimentation, but does not meet the

demands for such a pure supply as a filtration plant would give. A supervised milk supply has received attention in the endeavor to secure clean, pure milk.

"On account of the interest still centered in the use of diphtheria antitoxin, I will give the statistics of diphtheria for the years 1897 and 1898:

	1897	1898
Cases reported	154	103
Deaths	26	13
Mortality	16 2%	12.6%
Antitoxin used in	115	82
Deaths	14	8
Mortality	12.2%	9.75%
No antitoxin used in	39	21
Deaths	11	5
Mortality	28.2%	23.8%

"These statistics are my own and are not 'doctored.' The number of cases in which antitoxin was used includes some in which the antitoxin was used late in the disease and as a forlorn hope, so that the actual record for antitoxin is even better than would appear from the figures given."

Replying to the query, "To what extent is the Code of Ethics of the American Medical Association in operation today?" Dr. Elmer Barwis says: "To my knowledge, to its full extent. But perhaps I had better say in explanation that I have little personal knowledge of its requirements, as I have always thought that the 'Code of Ethics' as laid down over 1800 years ago should be sufficient to control the actions of medical men, who are supposed to be educated gentlemen, viz., 'Do unto others as you would that they should do unto you.'"

Dr. David Warman writes: "I would beg leave to say that in my opinion it doesn't seem to be in operation at all in this locality, judging from its continual violation in

various ways. In my judgment we should promptly and fearlessly punish every breach of the code and thereby establish our faith in our Code of Ethics and in each other. If we cannot do this, why not throw wide open the doors and ignore entirely all codes and rules of etiquette?"

The staffs of our hospitals in Trenton being composed entirely of members of our medical society, some recognition of the work done by these worthy institutions would seem proper.

St. Francis Hospital has just celebrated its twenty-fifth anniversary, and a resumé of its work during 1898 shows a total of 1,120 cases treated in the hospital proper, exclusive of dispensary cases; 222 operations, including 52 abdominal sections, 13 appendicitis cases, etc. The corps of physicians in attendance has been recently enlarged by the addition of an ophthalmologist and three assistant surgeons, and the hospital is well equipped with modern operating room and appliances, Rœntgen-ray apparatus, etc., for efficient work. It has about one hundred beds.

Mercer Hospital, opened about four years ago and having at present about thirty-five beds, reports for the year 1898, 258 cases treated in the wards and 135 operations, including 48 gynæcological ones. It has also a large dispensary service in all the general and special departments, and annually treats a large number of patients in each. Its equipment is new and complete.

G. H. PARKER, *Reporter.*

A Case of Dermoid Cyst.

BY J. S. JAMIESON, M.D., TRENTON, N. J.

The patient, a boy of fifteen years of age, six feet in height, weighing 215 pounds, somewhat dull mentally, gave a history of nothing abnormal, save that for three weeks past his mother had noticed on

his bed linen slight blood-stains coming apparently from the anal region. On examination, there were found three small orifices, the lowest one and one-half inches obliquely above and to the right of the tip of the coccyx; the other two in the same perpendicular plane and about three-quarters of an inch distant. Probing revealed the existence of three small sinuses meeting in a common point about three inches upward and outward in the substance of the gluteus maximus muscle. On withdrawing the probe, small portions of hair were adherent to it. With the assistance of Dr. Bruyere and Dr. Larison, of Lambertville, the latter of whom had brought the patient to me, the sinuses were slit up on a grooved director, and the sac laid open. It contained a tightly matted mass of short, dark hair, about the size of a marble, mingled with sebaceous matter and fragments of tissue. The cyst wall and sinuses were thoroughly curetted and the wound sutured with silkworm-gut without drainage. Union took place throughout by first intention. No microscopical examination was made.

MIDDLESEX COUNTY.

To the Chairman of the Standing Committee, &c.:

The Middlesex County Medical Society have held business meetings only during the year. These have been well attended, with the result that the society is strong numerically and financially. We joined with the New Jersey State Microscopical Society and the local Chapter of Phi Beta Kappa in securing a lecturer on liquid air. The lecture was largely attended and proved of great interest and value to all who heard it.

The health conditions of Middlesex county have been about as usual. No reports of any unusual amount of sickness have been sent in. During the year we lost by death one member, Dr. John Helm, who for many years has been a permanent delegate to the State Medical Society.

A. L. SMITH, *Reporter.*

MORRIS COUNTY.

To the Chairman of the Standing Committee, &c.:

The kind "assistance" so politely asked for in the circulars sent out, signally failed to materialize, so far as our society is concerned. Of the forty-eight copies sent out by the Reporter, but one "has e'er returned," from which it is reasonable to conclude that Morris County has absolutely nothing to say upon the topics suggested by the State Society.

The inference is not to be drawn from this, however, that medical matters hereabouts are in the lethargic condition which this would seem to indicate. On the contrary, our society was never more prosperous or active than at present. Its meetings are, as a rule, well attended; its discussions animated and interesting. At the semi-annual meeting held in Dover in December last, an interesting paper was read by Dr. H. W. Rich, of Port Oram, on "Diphtheria," and a very practical paper on "Fractures of the Femur," by Dr. F. W. Flagge, of Rockaway.

At the annual meeting in May last, held at Madison, Dr. H. C. Upchurch read an interesting paper on "Instrumental Obstetrics," and the retiring President, Dr. Thomas P. Prout, of the State Hospital, Morris Plains, gave a very scholarly address on "Albuminuria; Its Forms, Significance and Detection." Dr. Prout's paper was so well received that its publication was requested. Dr. F. W. Flagge, of Rockaway, also gave the history of an exceedingly interesting case of "Diaphragmatic Hernia."

Dr. H. V. Day, of Butler, to whom belongs the credit of being the only one in the entire society to make any response to the Reporter's call, reports an extensive

visitation of "la grippe" in his locality during December, January and February last, although "the type of the disease was not especially severe, the mortality being very low."

Dr. James Douglas, of Morristown, reports a case of hydrophobia, as follows: "The patient was bitten in November, 1897, by his own dog, but considering the dog in normal condition, simply had him shot, and his own wound cauterized four days after the occurrence. Eleven weeks later the patient was taken ill with symptoms which I at first thought to be an intensely hysterical condition, with constant dread of hydrophobia. But as he had assured me his dog was not mad when he was bitten, I considered it a case of lyssophobia. Every symptom, however, of genuine hydrophobia rapidiy developed, and the patient died five days after my first call to him.

"Dr. Thomas P. Prout, pathologist to the State Hospital, Morris Plains, made an autopsy, securing virus for pathological examination, some of which was sent to Drs. Wilson and Cabot, of the bacteriological laboratories, health department, New York. The experiments of all three physicians, microscopical and by inoculations of animals, proved conclusively the genuineness of the case. I learned after the patient's death, that his dog had been bitten by a mad dog some months previous to his attack upon his master."

E. P. COOPER, *Reporter.*

SALEM COUNTY.

To the Chairman of the Standing Committee, &c.:

Four meetings were held during the past year and as much interest has been shown as in the past.

Occasional cases of measles have been reported in the

lower part of the county; also several cases of mumps in Upper Penn's Neck township. No epidemics have been noted.

Two explosions at Dupont's powder mills, at Carney's Point, resulted in the killing of half a dozen men, while those not fatally injured required no special attention worthy of note.

H. T. JOHNSON, *Reporter.*

PEDRICKTOWN, N. J.

SOMERSET COUNTY.

To the Chairman of the Standing Committe, &c.:

The usual interest has been manifest in the meetings of our society. Dr. Taylor, of Millstone, reports a number of cases of diphtheria in which he had favorable results from the use of antitoxin. As in many other places during the past year, there have been more than the usual number of cases of typhoid fever in Somerville and vicinity. So far as I can learn, only one case has proved fatal, and that from peritonitis following perforation. The treatment of albuminuria has been exhaustively discussed by Drs. Cooper, Taylor and Beckman.

At our annual meeting, Dr. J. C. Wilson, of Philadelphia, read us an instructive paper on "Some Dropsies and their treatment." Dr. Wilson spoke of favorable results from the use of Southey's tubes. Dr. John W. Ward, of Trenton, also favored us with his presence at our annual meeting.

No cases of special interest are reported, excepting one of Ainhum, occurring in a colored man aged 59. This is of interest only because of its rarity in this locality.

No response has been received to the question, "To what extent is the Code of Ethics of the American Medical Association in operation today?"

May 31, 1899. A. L. STILLWELL, *Reporter.*

A Case of Ainhum.

BY A. L. STILLWELL, M.D., SOMERVILLE, N. J.

Theodore R., colored, aged 59, and a fairly well-preserved man for his age, came to my office Nov. 29, 1898. He stated that when nineteen years of age his toe was injured by being trod on by an ox. He first noticed difficulty with his toe six or seven years ago. It started with what he called the "ground itch," with itching and soreness about the toe. He has noticed that the toe has been contracting about the base for the last two years. Some pain in it caused him to consult a physician. The deep groove at the digito-plantar junction was well marked. To the eye the sulcus seemed to extend almost down to the bone, and had the appearence as if a band had been tied about the toe. On measurement the constricted part was found to be one and five-eighths inches in circumference, while the extremity measured two and seven-eighths inches. There seemed to be a preternatural mobility to the toe.

Amputation is the only treatment recommended for this affection, a treatment which nature herself, if let alone, will affect in from one to ten years.

Ainhum is rare, and of interest on that account. It has been claimed that it is peculiar to the African and dark races. It has been described by Silva Lima,* of Bahia, Brazil. Duhring † speaks of cases encountered in North Carolina and reported by Drs. Homaday and Pittmann. Matas,‡ in writing of "The peculiarities of the Negro," says that he has seen but one well authenticated case in New Orleans. The physical appearance is well illustrated by the cut accompanying Matas' article.

SUSSEX COUNTY.

To the Chairman of the Standing Committee, &c.:

At the annual meeting of the district medical society Dr. Voorhees reported an interesting case of acute nephritis in a girl æt. 14, with slight œdema, scanty urine, containing $33\frac{1}{3}$ per cent. albumen on boiling. Patient

* "Diseases of the Skin," Duhring, 3d edition, p. 491. † Op. cit. ‡ "System of Surgery," Vol. iv., p. 869.

was kept in bed, covered with blankets; diaphoretics and diuretics administered for four or five days, when convulsions supervened, patient growing rapidly worse. Hot blankets were applied, elaterium, croton oil and nitroglycerin administered, together with nitrate of amyl, during the convulsions. During ten hours there were twenty-five convulsions. Complete unconsciousness followed for six hours and partial unconsciousness of surroundings for five or six days. Improvement was gradual on milk diet and 40 minim. doses of tr. ferri chloride. The amount of urine secreted during twenty-four hours when iron was given was four pints, and when iron was omitted one pint less was voided.

Dr. Andress reported a similar case where improvement accompanied the use of sugar of milk.

Dr. Morrison reported a case of ophthalmia neonatorum, calling attention to the large amount of pus secreted and the comfort to be had from cold compresses.

Dr. Burd reported excellent results in the administration of nuclein solutions in pneumonia cases in which complete resolution had not taken place or was slow.

Dr. Burd also reports ten cases of scarlet fever with no deaths, and thirteen cases of diphtheria with two deaths.

Dr. Hughes has had, during July and August, a very large number of entero-colitis cases without any deaths, and twenty-four cases of lobar pneumonia during April. Also, during the past year he has had ten cases of appendicitis, with six operations and nine recoveries.

"La grippe" has been epidemic during the winter throughout the county, and whooping-cough of a severe form has prevailed in most sections.

No answer has been received on the subject for discussion, but I am safe in saying that the code is not in full force in this county.

S. B. STRALEY, *Reporter.*

UNION COUNTY.

To the Chairman of the Standing Committee, &c.:

From Union County there seems to be little to report outside of the doings of the medical society. Contagious diseases have been much fewer, with the exception of measles, which for several months has been severe both in number and type. There seems to be at present an epidemic of cerebro-spinal meningitis in Elizabeth, ten or twelve cases having been reported. Interest in and attendance upon the four regular meetings of the Union County Medical Society have been good. There have been five additions to the membership roll. At the last meeting officers for the year were elected as follows: President, Dr. E. B. Grier; Vice-President, Dr. J. B. Harrison; Secretary, Dr. Fred. Kinch; Treasurer, Dr. R. J. Montfort; Reporter, Dr. R. B. Whitehead.

R. B. WHITEHEAD, *Reporter.*

WARREN COUNTY.

To the Chairman of the Standing Committee, &c.:

I have received very few replies to the circular of inquiry mailed to each member of the district society. Yet, there is much satisfaction in knowing that our district has enjoyed an unusual freedom from epidemics during the past year. There have been a few cases of typhoid fever, diphtheria and scarlet fever, principally of a sporadic nature, arising from bad sanitary conditions in certain localities.

Our society is still flourishing, having added three new members thereto at our last annual meeting, June 6, 1899, and we have now reached "high-water mark" in the

history of the society, as regards membership, since its organization in 1826; yet, we anticipate a greater increase.

From observation and experience, I am of the opinion that only about fifty per cent. of the Code of Ethics of the American Medical Association is in operation today.

J. H. GRIFFITH, *Reporter.*

PHILLIPSBURG, N. J., June 15, 1899.

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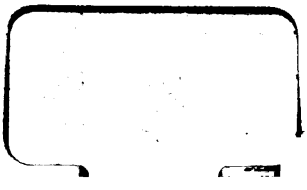

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